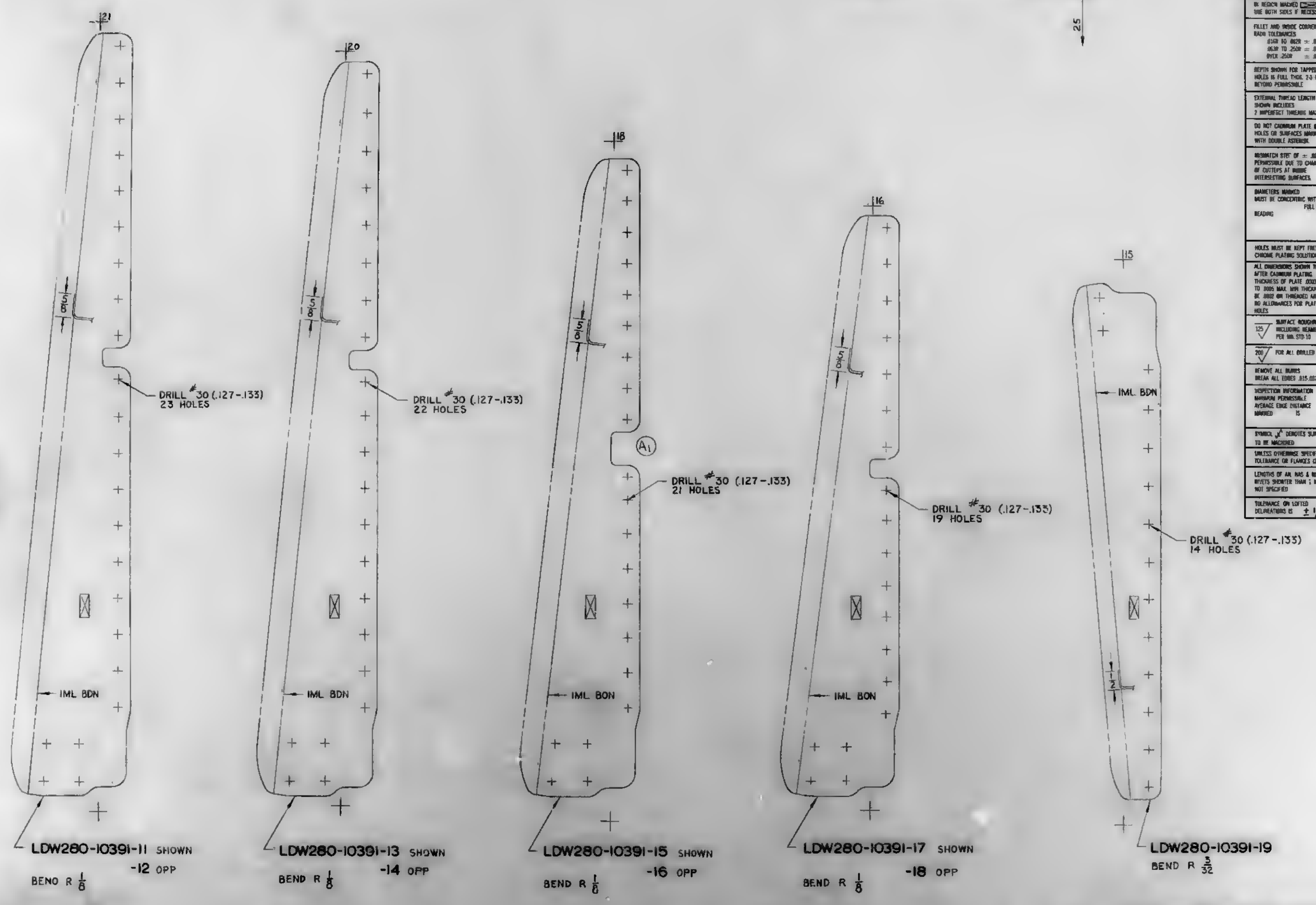
NOTES:
1. NO TOOLING HOLES PERMITTED IN PARTS.



121
120
118
116
115
5/8
1/2
DRILL #30 (.127-.133) 23 HOLES
DRILL #30 (.127-.133) 22 HOLES
DRILL #30 (.127-.133) 21 HOLES
DRILL #30 (.127-.133) 19 HOLES
DRILL #30 (.127-.133) 14 HOLES
A1
IML BDN
LDW280-10391-11 SHOWN -12 OPP
BEND R 1/8
LDW280-10391-13 SHOWN -14 OPP
BEND R 1/8
LDW280-10391-15 SHOWN -16 OPP
BEND R 1/8
LDW280-10391-17 SHOWN -18 OPP
BEND R 1/8
LDW280-10391-19
BEND R 3/32

MANUFACTURING OPERATIONS UNLESS OTHERWISE SPECIFIED NOTES CHECKED ✓ APPLY TO THIS DWG	
RUBBER STAMP PART NUMBER AND ALL OTHER MARKINGS IN REGION MARKED ▭ USE BOTH SIDES IF NECESSARY	✓
FILLET AND INSIDE CORNER RADII TOLERANCES .016R TO .062R ± .010 .063R TO .250R ± .015 OVER .250R ± .030	
DEPTH SHOWN FOR TAPPED HOLES IS FULL THDS. 2-3 IMP THDS. BEYOND PERMISSIBLE	
EXTERNAL THREAD LENGTH SHOWN INCLUDES 2 IMPERFECT THREADS MAX.	
DO NOT CADMIUM PLATE & PAINT HOLES OR SURFACES MARKED WITH DOUBLE ASTERISK	
MISMATCH STEP OF ± .005 PERMISSIBLE DUE TO CHANGE OF CUTTERS AT INSIDE INTERSECTING SURFACES.	
DIAMETERS MARKED MUST BE CONCENTRIC WITHIN FULL INDICATOR READING	
HOLES MUST BE KEPT FREE OF CHROME PLATING SOLUTION	
ALL DIMENSIONS SHOWN TO BE MET AFTER CADMIUM PLATING THICKNESS OF PLATE .0003 MIN TO .0005 MAX. MIN THICKNESS TO BE .0002 ON THREADED AREAS. NO ALLOWANCES FOR PLATING IN HOLES	
125 √ SURFACE ROUGHNESS INCLUDING REAMED HOLES PER MIL STD-10	
200 √ FOR ALL DRILLED HOLES	
REMOVE ALL BURRS BREAK ALL EDGES .015-.035	
INSPECTION INFORMATION MINIMUM PERMISSIBLE AVERAGE EDGE DISTANCE MARKED IS	
SYMBOL √ DENOTES SURFACE TO BE MACHINED	
UNLESS OTHERWISE SPECIFIED TOLERANCE ON FLANGES ∠ ± 1/32	
LENGTHS OF ALL NAS & MS AL ALY RIVETS SHORTER THAN 1 INCH ARE NOT SPECIFIED	
TOLERANCE ON LOFTED DELINEATIONS IS ± 1/32	✓

GRUMMAN AIRCRAFT ENGRG CORP. BETHPAGE L. I. NEW YORK

MODEL OR E40 ITEM	SIZE	CODE IDENT NO.		
LEM	F	26512	LDW280-10391	A
	SCALE FULL		SHEET 3	

LDW280-10391

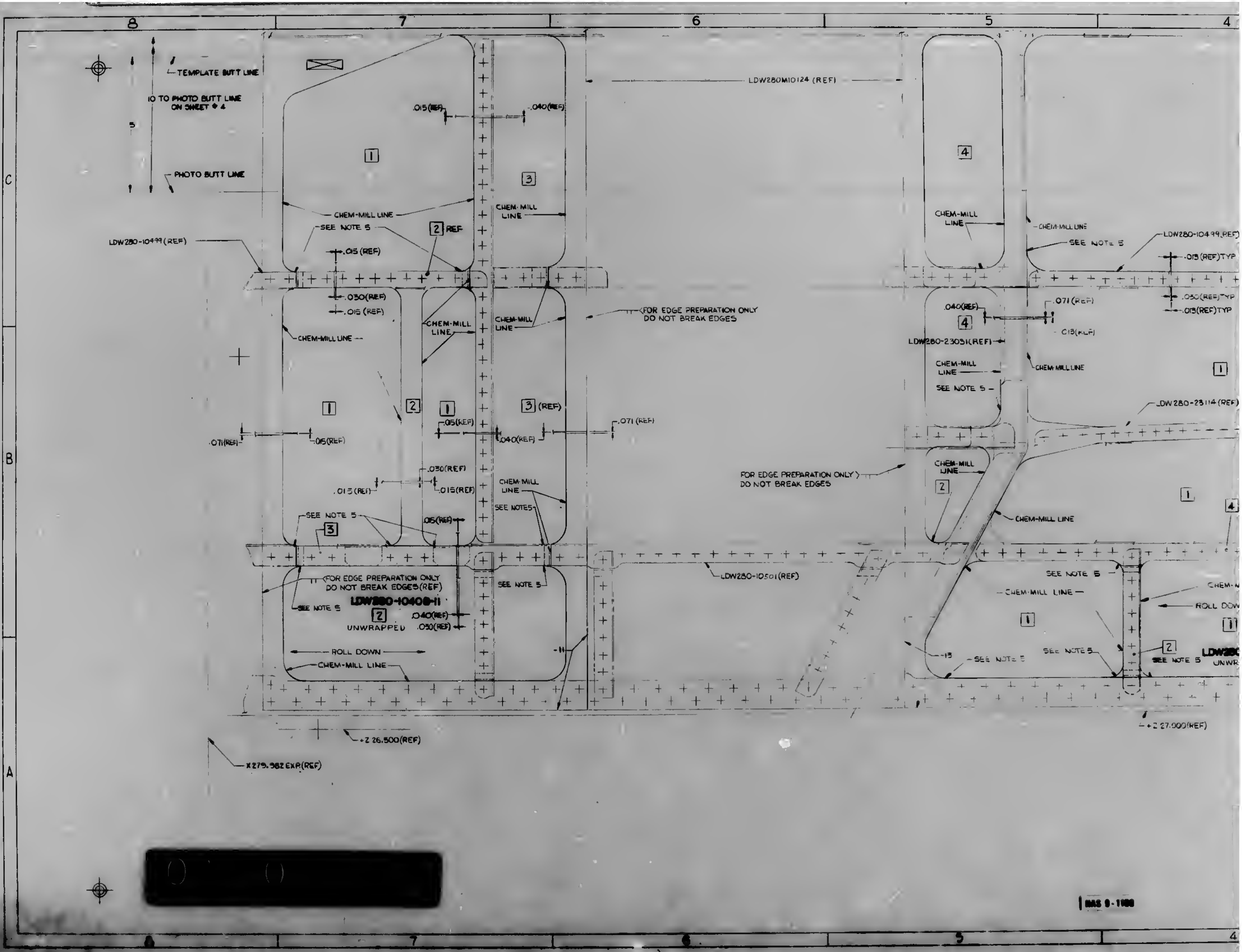
FOR PHOTO REPRODUCTION

K2

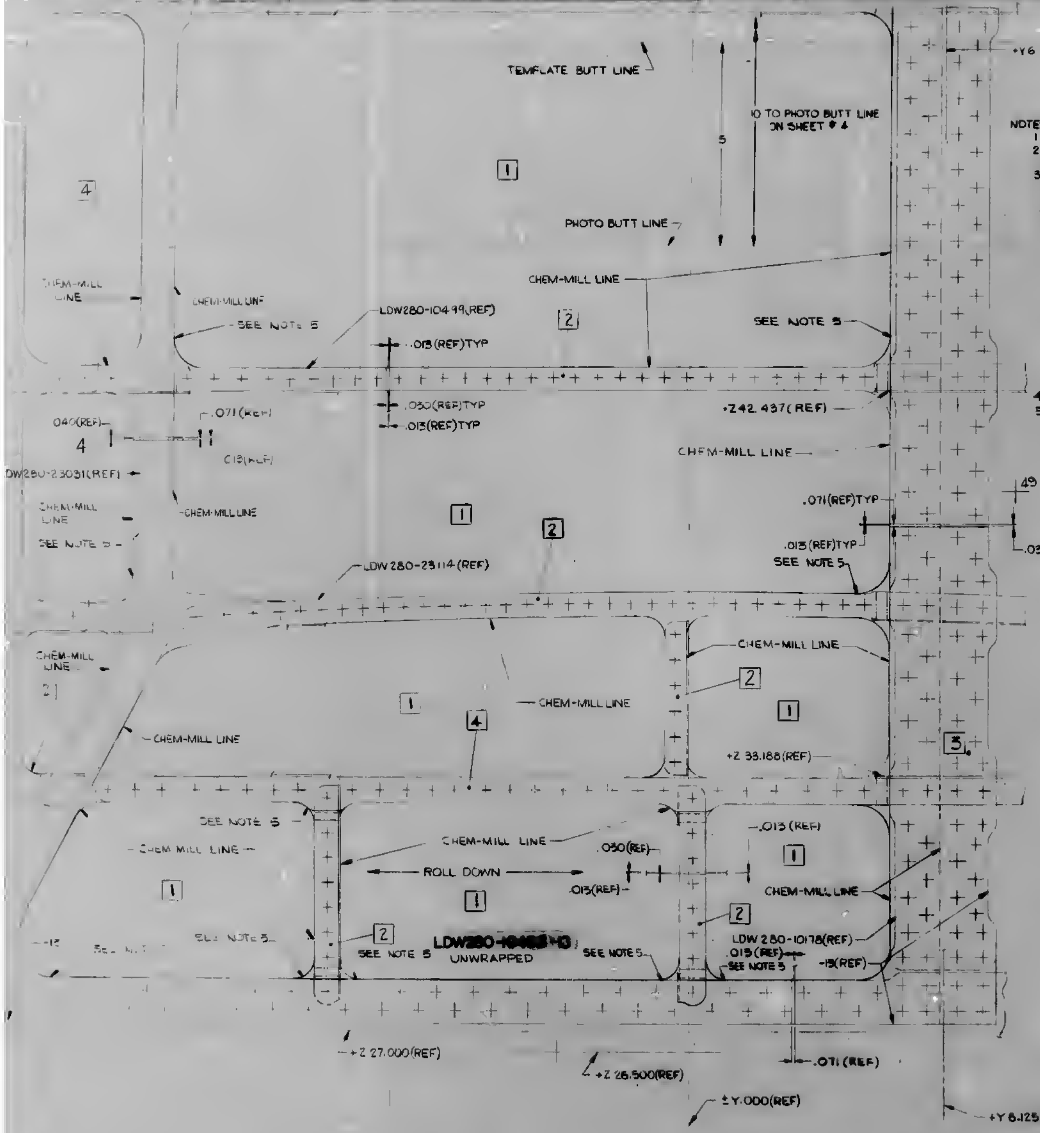
NAS 9-1100

01

LDW280-10408 SH3


8
7
6
5
4
C
B
A
TEMPLATE BUTT LINE
10 TO PHOTO BUTT LINE ON SHEET # 4
5
PHOTO BUTT LINE
LDW280M10124 (REF)
.015(REF)
.040(REF)
1
3
4
CHEM-MILL LINE
CHEM-MILL LINE
SEE NOTE 5
2 REF
LDW280-10499 (REF)
.015 (REF)
.030(REF)
.015 (REF)
CHEM-MILL LINE
CHEM-MILL LINE
FOR EDGE PREPARATION ONLY DO NOT BREAK EDGES
LDW280-10499 (REF)
.013 (REF) TYP
.030 (REF) TYP
.013 (REF) TYP
.040(REF)
.071 (REF)
.013(REF)
LDW280-23031(REF)
CHEM-MILL LINE
SEE NOTE 5
2
3 (REF)
.015(REF)
.040(REF)
.071 (REF)
.071(REF)
.015(REF)
LDW280-23114 (REF)
.030(REF)
.015 (REF)
.015(REF)
CHEM-MILL LINE
SEE NOTES
FOR EDGE PREPARATION ONLY DO NOT BREAK EDGES
CHEM-MILL LINE
.015(REF)
SEE NOTE 5
LDW280-10501(REF)
FOR EDGE PREPARATION ONLY DO NOT BREAK EDGES(REF)
SEE NOTE 5
LDW280-10408-11
UNWRAPPED
.040(REF)
.030(REF)
ROLL DOWN
-11
-13
ROLL DOWN
LDW28
UNWR
+Z 26.500(REF)
X275.382 EXP.(REF)
+Z 27.000(REF)
NAS 9-1100

[redacted]


TEMPLATE BUTT LINE
0 TO PHOTO BUTT LINE ON SHEET # 4
5
PHOTO BUTT LINE
CHEM-MILL LINE
SEE NOTE 5
LDW280-10499(REF)
.013(REF)TYP
.030(REF)TYP
.013(REF)TYP
.071(REF)
.040(REF)
.013(REF)
LDW280-23031(REF)
+Z42.437(REF)
.071(REF)TYP
.013(REF)TYP
.032(REF)
LDW 280-23114(REF)
+Z 33.188(REF)
.013(REF)
.030(REF)
ROLL DOWN
.013(REF)
LDW280-10408-13
UNWRAPPED
LDW 280-10178(REF)
.015(REF)
-13(REF)
+Z 27.000(REF)
+Z 26.500(REF)
.071(REF)
±Y.000(REF)
+Y 6.125 EXP(REF)
+Y6 125EXP(REF)
49
1
2
3
4

60

30

NOTES:

1. NO TOOLING HOLES PERMITED IN PARTS.
2. HOLE LOCATIONS FOR TOOLING PURPOSES ONLY.
3. WEIGHT OF CHEM-MILL PANELS AS SHOWN (BUT NOT INCLUDING RIVET HOLES OR EXCESS MATERIAL FOR TOOLING) SHALL NOT EXCEED 1.58 POUNDS FOR -11 3.04 POUNDS FOR -13, AND .61 POUNDS FOR -15.

LDW280-10408-11

[illegible]

SYMBOL	THICKNESS AFTER CHEM-MILLING	DEPTH OF CUT
1	$.015^{+.005}_{-.001}$	.056 REF
2	.030 ±.002	.041 REF
3	$.040^{+.003}_{-.002}$	.031 REF

4. SIZE SHEET STOCK FROM .071±.003 TO $\frac{.071}{.068}$
5. TOLERANCE ±.125 AT TANGENCY POINTS OF CHEM MILL LINE CORNER RADII BETWEEN TWO ETCHED SURFACES.

LDW280-10408-13

[illegible]

SYMBOL	THICKNESS AFTER CHEM-MILLING	DEPTH OF CUT
1	$.013^{+.005}_{-.001}$	.058 REF
2	.030 ±.002	.041 REF
3		$.032^{+.004}_{-.000}$
4	$.040^{+.003}_{-.002}$	.031 REF

LDW280-10408-15

[illegible]

SYMBOL	THICKNESS AFTER CHEM-MILLING	DEPTH OF CUT
1	$.013^{+.005}_{-.001}$	.058 REF
2	.030 ±.002	.041 REF
3		

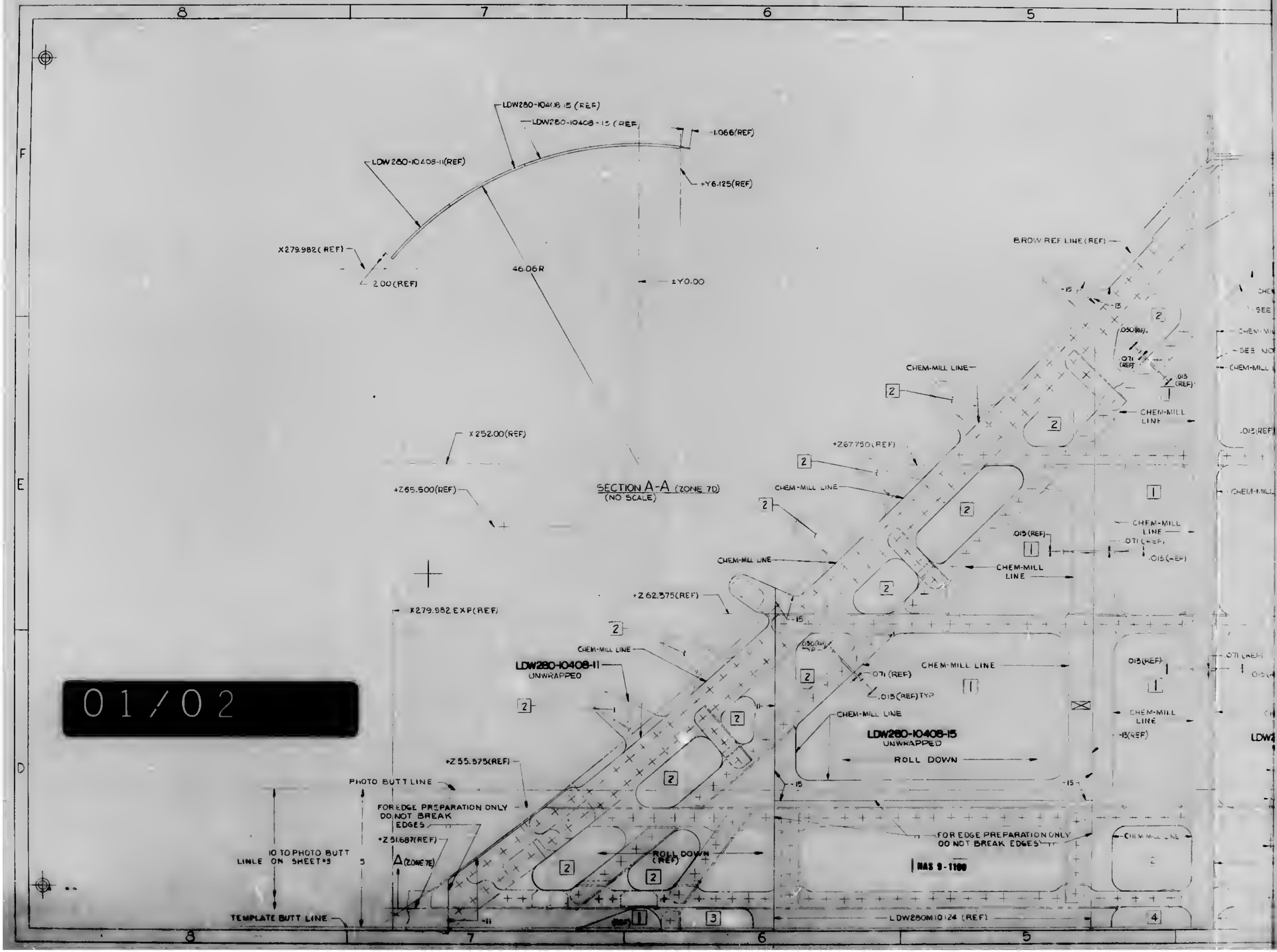
0 2 / 0

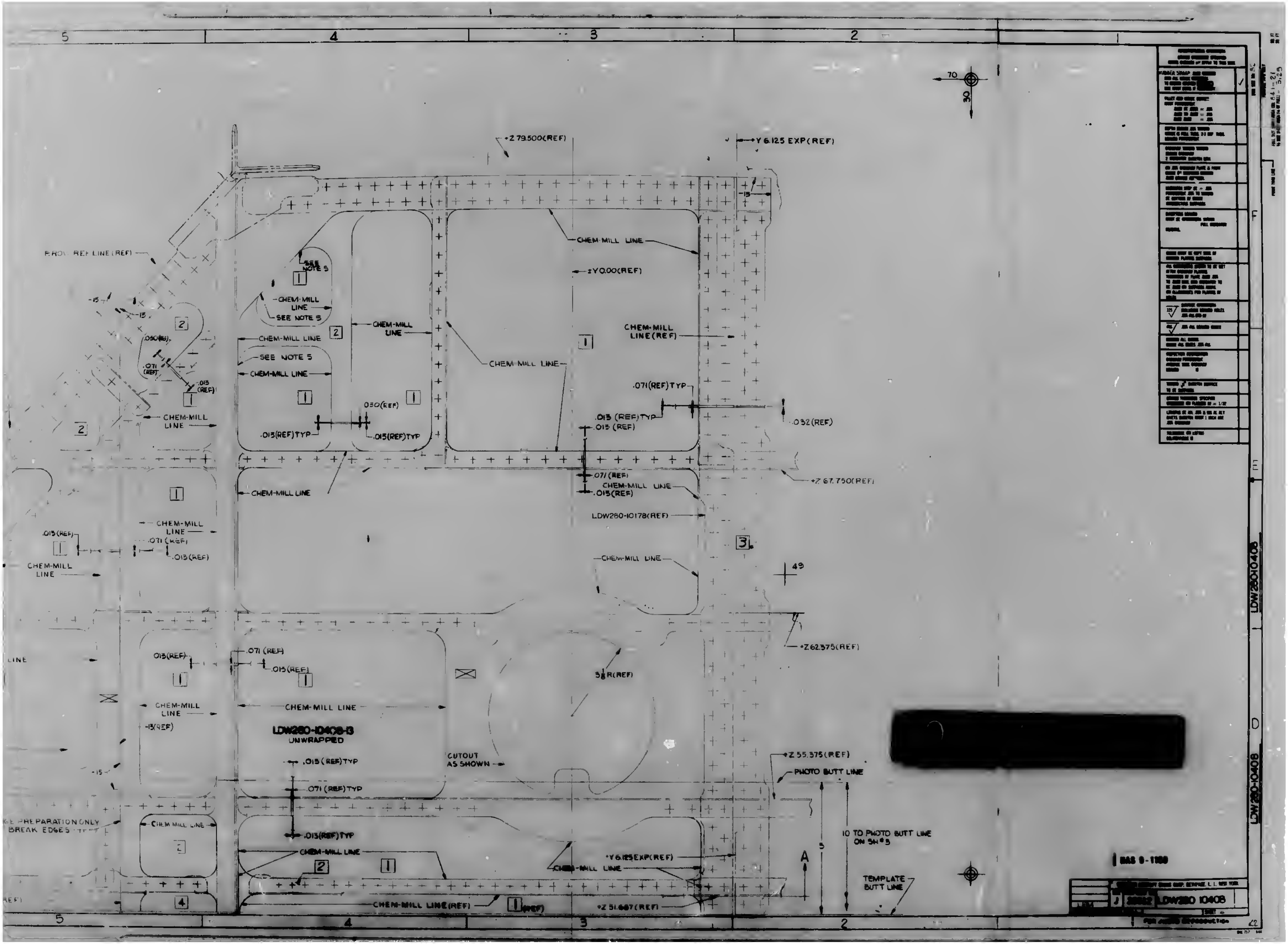
NAS 9-1100

GRUMMAN AIRCRAFT ENGINEERING CORP
BETHPAGE, L.I., N.Y.

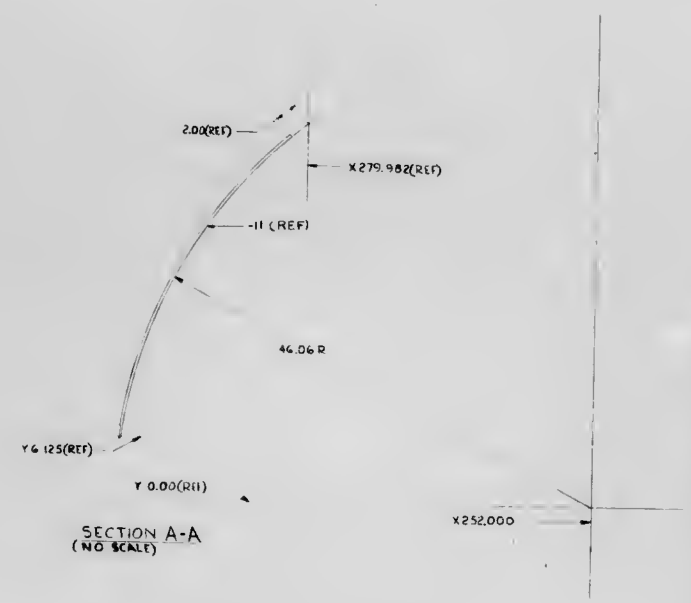
LEM
26512
J
LDW280-10408
SCALE FULL
SHEET 3

FOR PHOTO REPRODUCTION


8
7
6
5
F
E
D
LDW280-10408-15 (REF)
LDW280-10408-15 (REF
LDW280-10408-11(REF)
-1.066(REF)
+Y6.125(REF)
X279.982(REF)
2.00(REF)
46.06R
±Y0.00
X252.00(REF)
+Z65.500(REF)
SECTION A-A (ZONE 7D)
(NO SCALE)
X279.982 EXP(REF)
+Z62.375(REF)
+Z67.750(REF)
BROW REF LINE (REF)
CHEM-MILL LINE
.050(REF)
.071 (REF)
.013 (REF)
.013(REF)
.071 (REF)
.013(REF) TYP
LDW280-10408-11
UNWRAPPED
LDW280-10408-15
UNWRAPPED
ROLL DOWN
ROLL DOWN (REF)
+Z55.375(REF)
+Z51.687(REF)
PHOTO BUTT LINE
FOR EDGE PREPARATION ONLY
DO NOT BREAK
EDGES
FOR EDGE PREPARATION ONLY
DO NOT BREAK EDGES
10 TO PHOTO BUTT
LINE ON SHEET 5
A (ZONE 7E)
TEMPLATE BUTT LINE
LDW280M10124 (REF)
-15
-13
-11
-13(REF)
NAS 9-1100
1
2
3
4
SEE
01/02


5
4
3
2
1
F
E
D
70
30
+Z 79.500(REF)
+Y 6.125 EXP(REF)
-15
F.ROW REF LINE (REF)
SEE NOTE 5
CHEM-MILL LINE
SEE NOTE 5
CHEM-MILL LINE
CHEM-MILL LINE
SEE NOTE 5
CHEM-MILL LINE
CHEM-MILL LINE
±Y 0.00(REF)
CHEM-MILL LINE (REF)
CHEM-MILL LINE
.030(REF)
.071 (REF)
.013 (REF)
CHEM-MILL LINE
.030(REF)
.013(REF)TYP
.013(REF)TYP
.071(REF) TYP
.013 (REF) TYP
.013 (REF)
.032 (REF)
.071 (REF)
CHEM-MILL LINE
.013(REF)
+Z 67.750(REF)
CHEM-MILL LINE
LDW280-10178(REF)
.013(REF)
CHEM-MILL LINE
.071 (REF)
.013 (REF)
CHEM-MILL LINE
CHEM-MILL LINE
49
LINE
.013(REF)
.071 (REF)
.013(REF)
5/8 R(REF)
+Z 62.375(REF)
CHEM-MILL LINE
CHEM-MILL LINE
-.13(REF)
LDW280-10408-13
UNWRAPPED
CUTOUT AS SHOWN
.013 (REF) TYP
.071 (REF) TYP
+Z 55.375 (REF)
PHOTO BUTT LINE
-15
EDGE PREPARATION ONLY BREAK EDGES
CHEM MILL LINE
.013(REF) TYP
CHEM-MILL LINE
+Y 6.125 EXP(REF)
CHEM-MILL LINE
10 TO PHOTO BUTT LINE ON SH #3
A
5
TEMPLATE BUTT LINE
CHEM-MILL LINE(REF)
(REF)
+Z 51.687 (REF)
(REF)
1
2
3
4
LDW280-10408
LDW280-10408
BAS 9-1100
LDW280 10408
SHEET 4
22

[redacted]


2.00(REF)
X279.982(REF)
-11 (REF)
46.06 R
Y6.125(REF)
Y 0.00(REF)
X252.000

SECTION A-A
(NO SCALE)

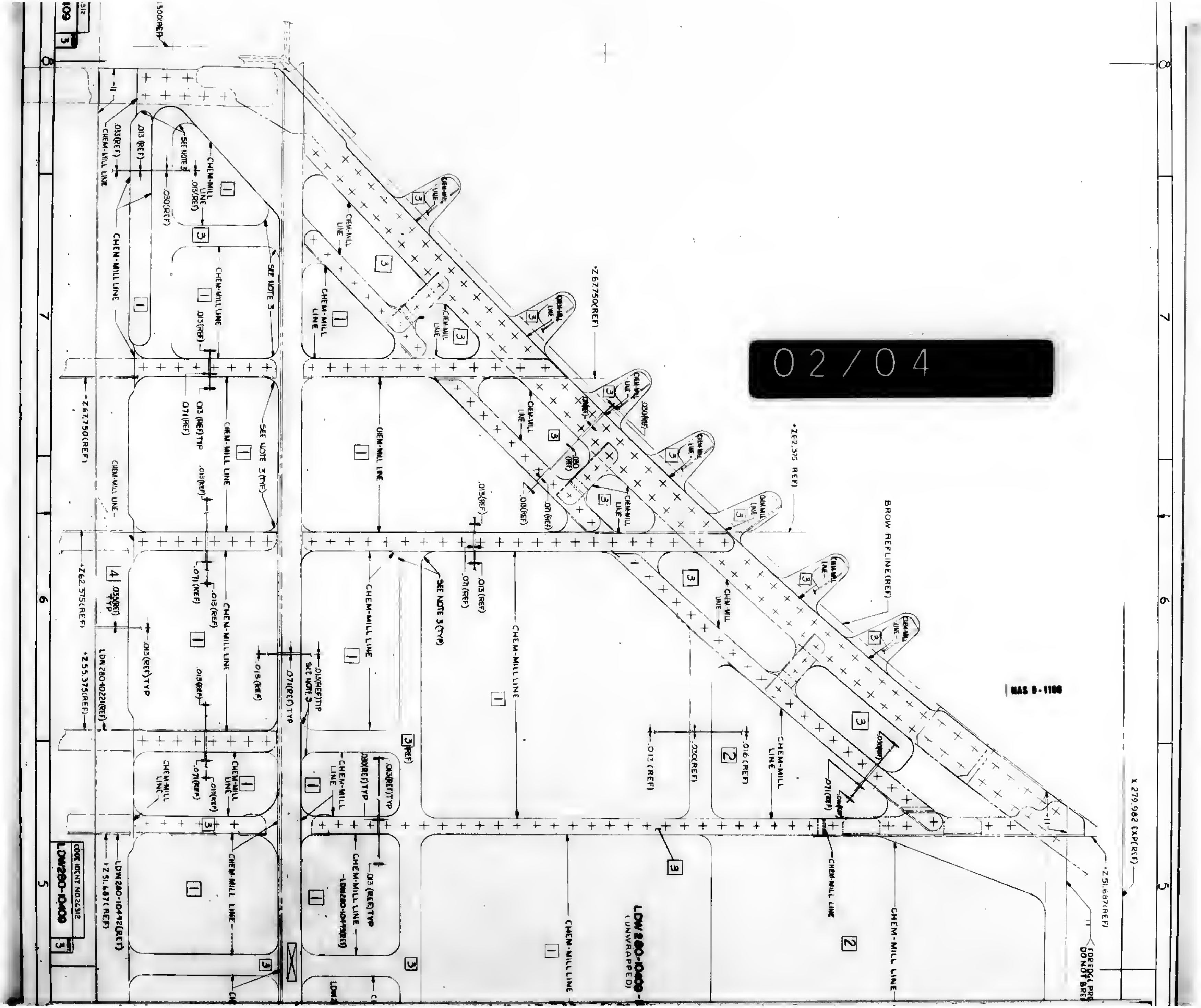
+ Z 79.500(REF)
-11

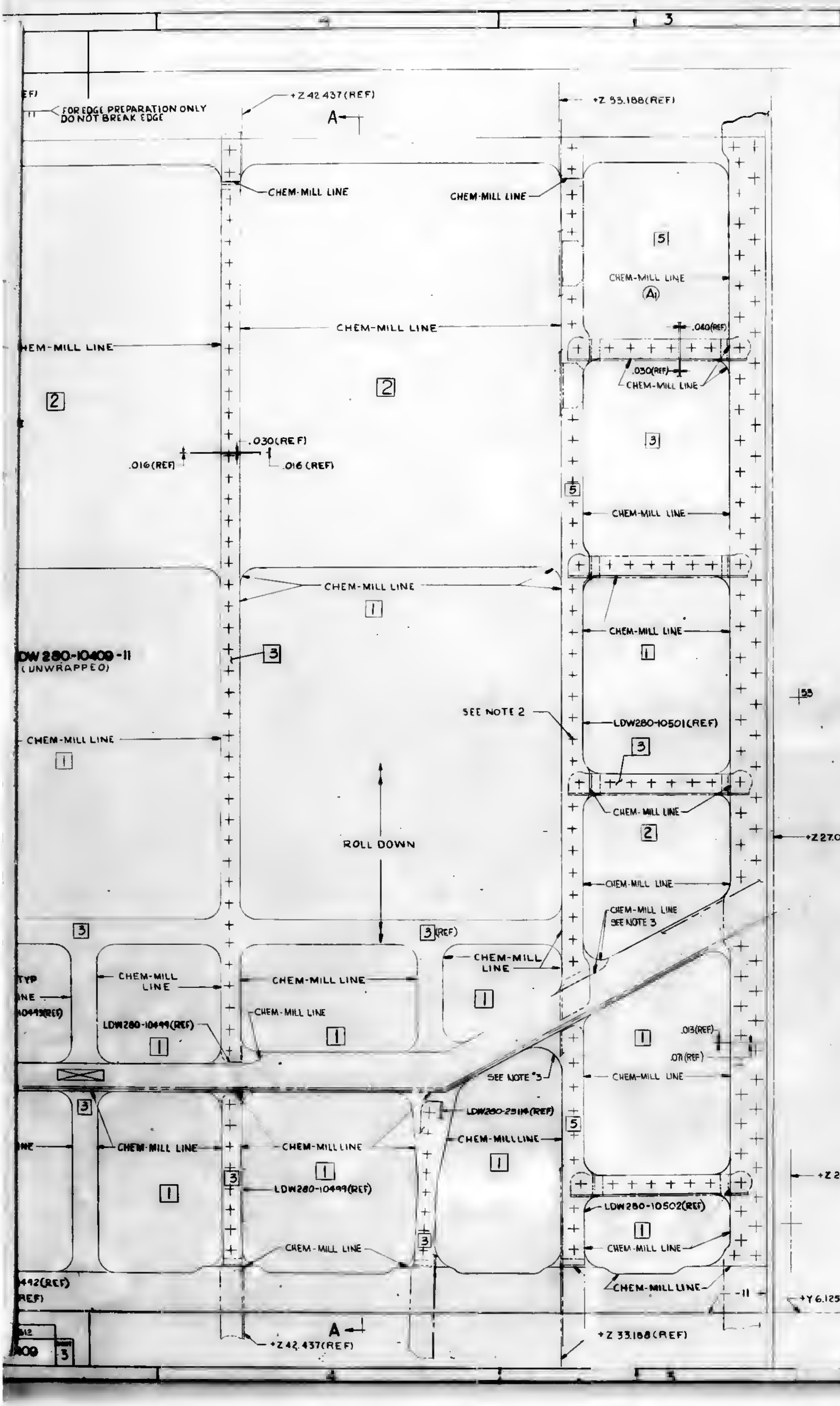
01/04

NAS 9-1100

CODE IDENT NO. 26512

LDW280-10409 | 3


02/04
LDW280-10409
CODE IDENT NO.26512
LDW280-10409-
(UNWRAPPED)
LDW280-10221(REF)
LDW280-10442(REF)
NAS 9-1100
CHEM-MILL LINE
SEE NOTE 3
SEE NOTE 3 (TYP)
BROW REF LINE (REF)
+Z67.750(REF)
+Z62.375 REF
+Z62.375(REF)
+Z55.375(REF)
+Z51.687(REF)
x 279.982 EXP(REF)
FOR EDGE PREP
DO NOT BREAK
.013(REF)
.030(REF)
.071(REF)
.016(REF)
.013(REF)TYP
.071(REF) TYP
.030(REF)TYP
8
7
6
5
1
2
3
4



FOR EDGE PREPARATION ONLY DO NOT BREAK EDGE
+Z 42.437 (REF)
A
+Z 33.188 (REF)
CHEM-MILL LINE
5
A1
.040 (REF)
.030 (REF)
3
2
.030 (REF)
.016 (REF)
.016 (REF)
1
LDW 280-10409-11 (UNWRAPPED)
SEE NOTE 2
LDW280-10501 (REF)
ROLL DOWN
+Z 27.000 (REF)
3 (REF)
CHEM-MILL LINE SEE NOTE 3
TYP
LDW280-10499 (REF)
.013 (REF)
.071 (REF)
SEE NOTE 3
LDW280-23114 (REF)
+Z 26.500 (REF)
LDW280-10502 (REF)
-11
+Y 6.125 EXP (REF)
+Z 33.188 (REF)
+Z 42.437 (REF)
55
90
33
4
3
2

LDW280-10409-11

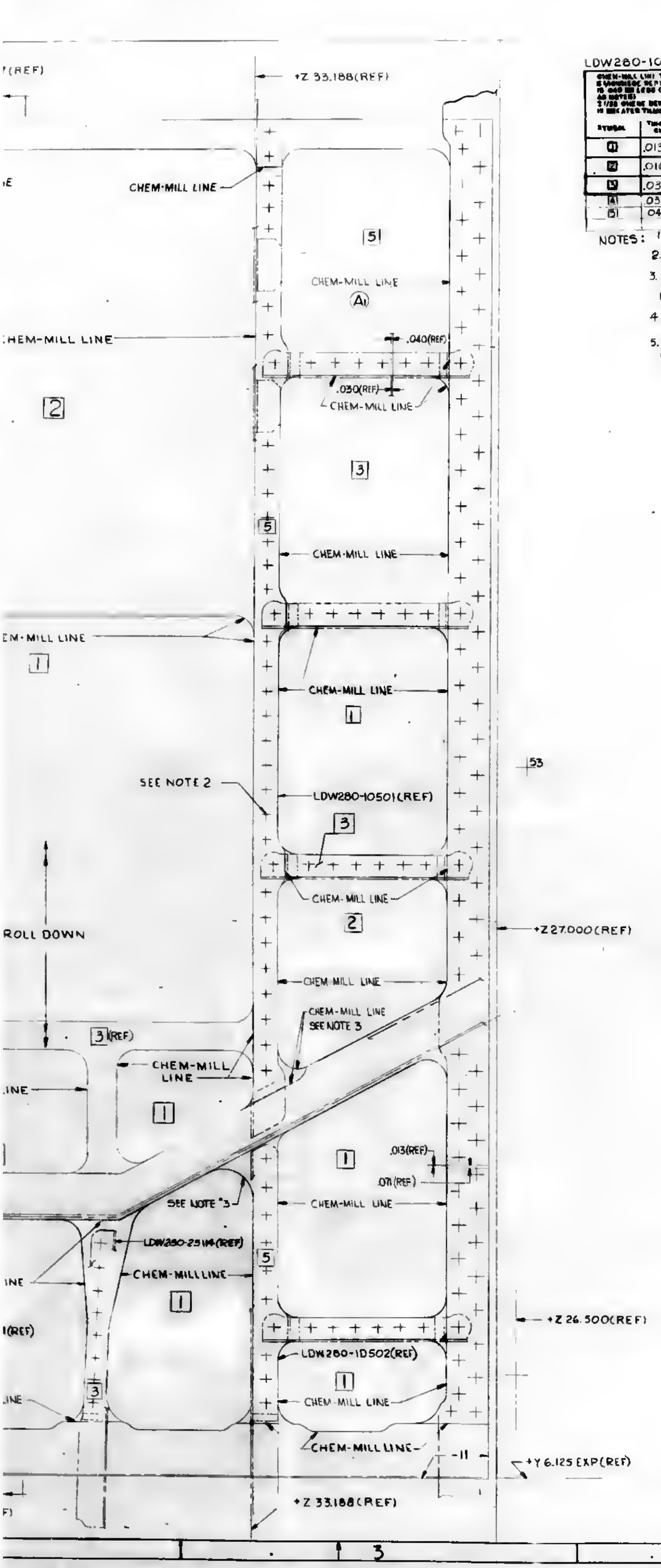
[illegible]	[illegible]	DEPTH OF CUT
1	.015 +.003 -.001	.058 REF
2	.016 ±.002	.055 REF
3	.030 ±.002	.041 REF
4	.033 [illegible]	.038 REF
5	.040 [illegible]	.031 REF

NOTES:
1. NO TOOLING HOLES PERMITTED IN PARTS.
2. HOLE LOCATIONS FOR TOOLING PURPOSES ONLY.
3. TOLERANCE ± .125 AT TANGENCY POINTS OF CHEM-MILL LINE CORNER RADII BETWEEN TWO ETCHED SURFACES.
4. SIZE SHEET STOCK FROM .071±.003 TO $\frac{.071}{.068}$
5. WEIGHT OF -11 CHEM-MILLED SKIN AS SHOWN (BUT NOT INCLUDING RIVET HOLES OR EXCESS MATERIAL FOR TOOLING) SHALL NOT EXCEED [illegible] POUNDS.

MAS 0-1100

03/04

CODE IDENT NO. 26512
LDW280-10409
3


+Z 33.188(REF)
CHEM-MILL LINE
5
CHEM-MILL LINE
A1
.040(REF)
.030(REF)
CHEM-MILL LINE
2
3
5
CHEM-MILL LINE
EM-MILL LINE
1
CHEM-MILL LINE
1
SEE NOTE 2
LDW280-10501(REF)
3
CHEM-MILL LINE
2
ROLL DOWN
CHEM-MILL LINE
CHEM-MILL LINE
SEE NOTE 3
3(REF)
CHEM-MILL LINE
1
1
.013(REF)
.071(REF)
SEE NOTE 3
CHEM-MILL LINE
LDW280-25114(REF)
CHEM-MILL LINE
1
5
+Z 27.000(REF)
+Z 26.500(REF)
LDW280-10502(REF)
1
CHEM-MILL LINE
3
CHEM-MILL LINE
-11
+Y 6.125 EXP(REF)
+Z 33.188(REF)
53

LDW280-10409-11

CHEM-MILL LINE TOLERANCE [illegible]

SYMBOL	THICKNESS AFTER CHEM-MILLING	DEPTH OF CUT
1	$.013 ^{+.003}_{-.001}$	.058 REF
2	.016 ± .002	.055 REF
3	.030 ± .002	.041 REF
4	$.033 ^{+.002}_{-.000}$	.038 REF
5	.040 ± [illegible]	.031 REF

NOTES:
1. NO TOOLING HOLES PERMITTED IN PARTS.
2. HOLE LOCATIONS FOR TOOLING PURPOSES ONLY.
3. TOLERANCE ± .125 AT TANGENCY POINTS OF CHEM-MILL LINE CORNER RADII BETWEEN TWO ETCHED SURFACES.
4. SIZE SHEET STOCK FROM .071 ± .003 TO $\frac{.071}{.068}$
5. WEIGHT OF -11 CHEM-MILLED SKIN AS SHOWN (BUT NOT INCLUDING RIVET HOLES OR EXCESS MATERIAL FOR TOOLING) SHALL NOT EXCEED 3.83 POUNDS.

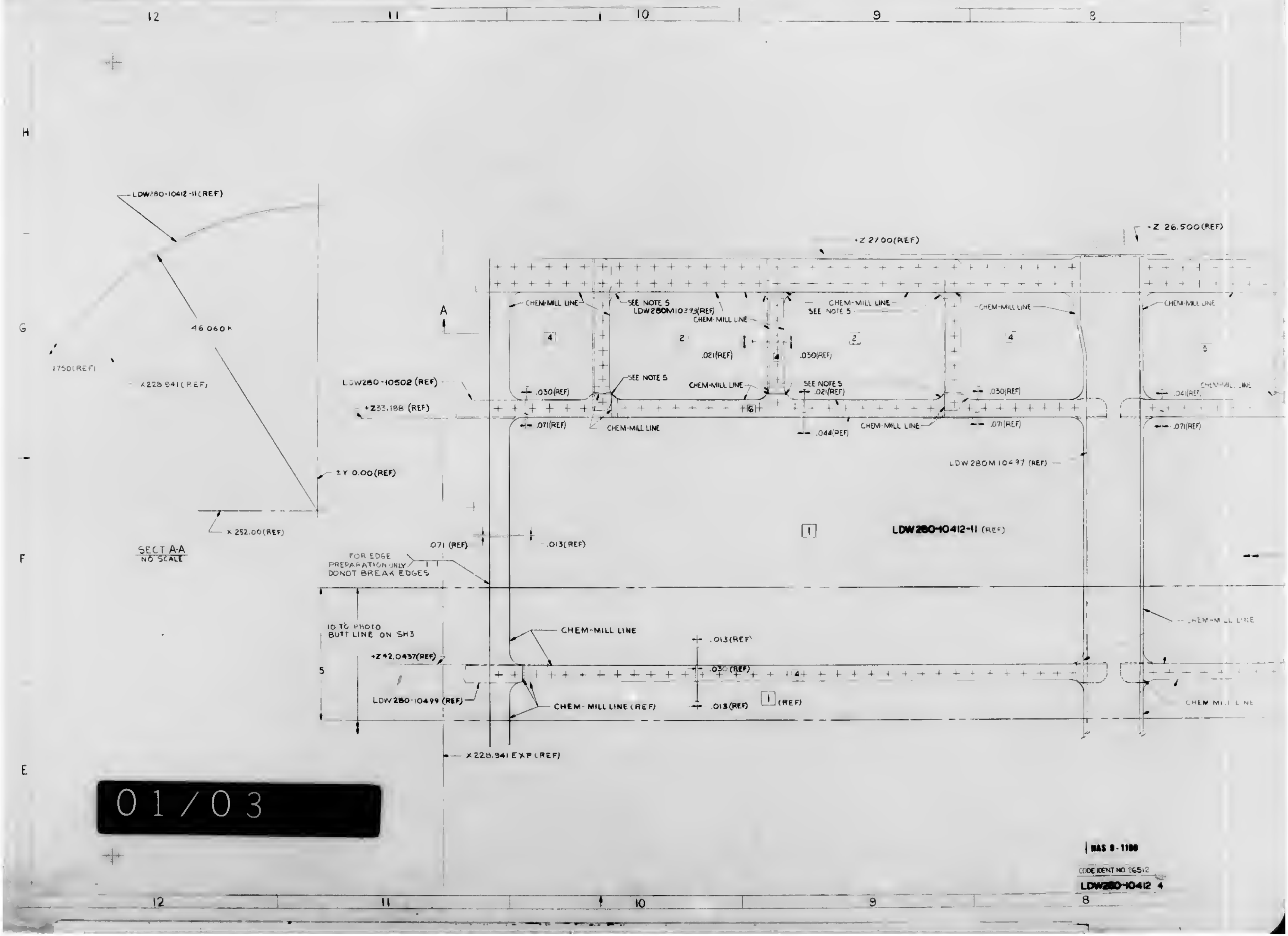
NAS 0-1100

CODE IDENT NO. 26512
LDW 280-10409
SHEET 3

04/04

GRUMMAN AIRCRAFT ENGINEERING CORP. BETHPAGE, L.I., NEW YORK				
LEM	SIZE K	CODE IDENT NO. 26512	LDW280-10409	A
SCALE FULL			SHEET 3	

FOR PHOTO REPRODUCTION K2


12
11
10
9
8
H
G
F
E
5
LDW280-10412-11 (REF)
46.060 R
1750 (REF)
X 228.941 (REF)
± Y 0.00 (REF)
X 252.00 (REF)
SECT A-A
NO SCALE
A
+Z 27.00 (REF)
+Z 26.500 (REF)
CHEM-MILL LINE
SEE NOTE 5
LDW280M10393 (REF)
SEE NOTE 5
4
2
2
4
5
1
6
.021 (REF)
.030 (REF)
.030 (REF)
.021 (REF)
.030 (REF)
.041 (REF)
.071 (REF)
.071 (REF)
.071 (REF)
.044 (REF)
LDW280-10502 (REF)
+Z 33.188 (REF)
LDW280M10497 (REF)
LDW280-10412-11 (REF)
.071 (REF)
.013 (REF)
FOR EDGE PREPARATION ONLY DO NOT BREAK EDGES
10 TO PHOTO BUTT LINE ON SH3
+Z 42.0437 (REF)
.013 (REF)
.030 (REF)
.013 (REF)
1 (REF)
LDW280-10499 (REF)
CHEM-MILL LINE (REF)
X 228.941 EXP (REF)

01/03

NAS 9-1100

CODE IDENT NO 26512

LDW280-10412 4

QTY PER ASSEMBLY	CODE IDENT	PART NO.	I&T	NOMENCLATURE OR DESCRIPTION	MATERIAL	GOVT SPEC	COML SPEC	STOCK SIZE	PROCESS SYM	FINISH NO.	ZONE
		LDW280-10413-17	E	SKIN	AL ALLOY SH	MIL-A-8920	2219-T81	SEE NOTE 3 41 3/8 X 49 3/8	CM	#88	
		LDW280-10413-15	E	SKIN	AL ALLOY SH	MIL-A-8920	2219-T81	SEE NOTE 3 41 3/8 X 49 3/8	CM	#88	

SYM OR NO.	PROCESS OR FINISH	GRUMMAN SPEC OR MILITARY SPEC	SYM OR NO.	PROCESS OR FINISH	GRUMMAN SPEC OR MILITARY SPEC	SYM OR NO.	PROCESS OR FINISH	GRUMMAN SPEC OR MILITARY SPEC
						CM	CHEM-MILL	LSP14-26100
						88	ANODIZE	LSP14-9030

I & T: IDENTIFICATION AND TRACEABILITY IN ACCORDANCE WITH : NONE

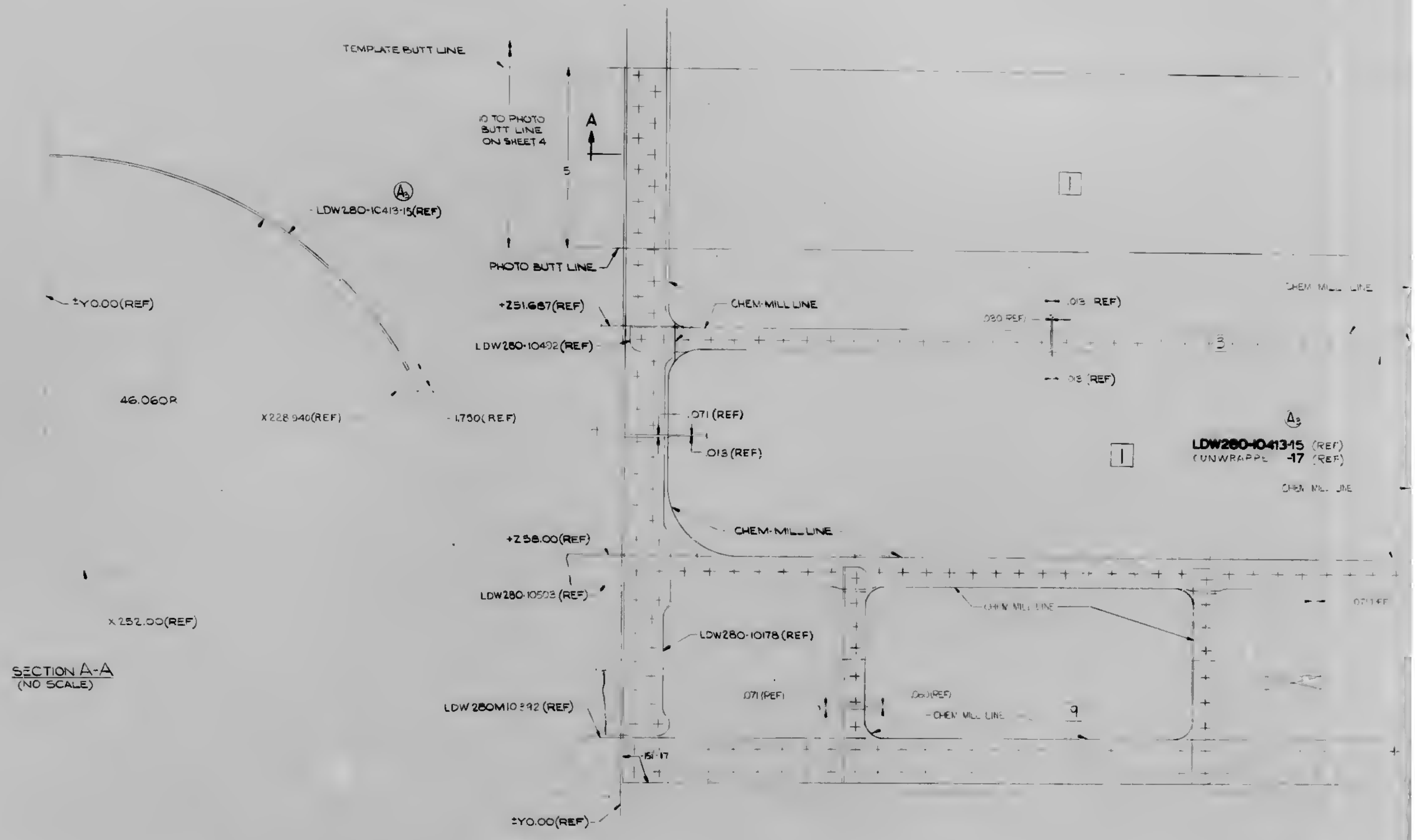
GRUMMAN AIRCRAFT ENGRG CORP, BETHPAGE, L. I., NEW YORK

SIZE	CODE IDENT NO.		
B	26512	LDW280-10413	A
SCALE NONE			SHEET 2

GAS 77.2 7-60

0 1

NAS 9-1100


TEMPLATE BUTT LINE
10 TO PHOTO BUTT LINE ON SHEET 4
5
A
A3
LDW280-10413-15(REF)
PHOTO BUTT LINE
±Y0.00(REF)
+Z51.687(REF)
CHEM-MILL LINE
LDW280-10492(REF)
.030 REF
.013 REF
.013 (REF)
3
46.060R
X228.940(REF)
1.750(REF)
.071 (REF)
.013 (REF)
1
1
A3
LDW280-10413-15 (REF)
(UNWRAPPED) -17 (REF)
CHEM MILL LINE
CHEM MILL LINE
CHEM-MILL LINE
+Z58.00(REF)
LDW280-10503 (REF)
X252.00(REF)
CHEM MILL LINE
.071 REF
LDW280-10178 (REF)
.071 (REF)
.060(REF)
CHEM MILL LINE
9
LDW280M10392 (REF)
.151-.17
±Y0.00(REF)

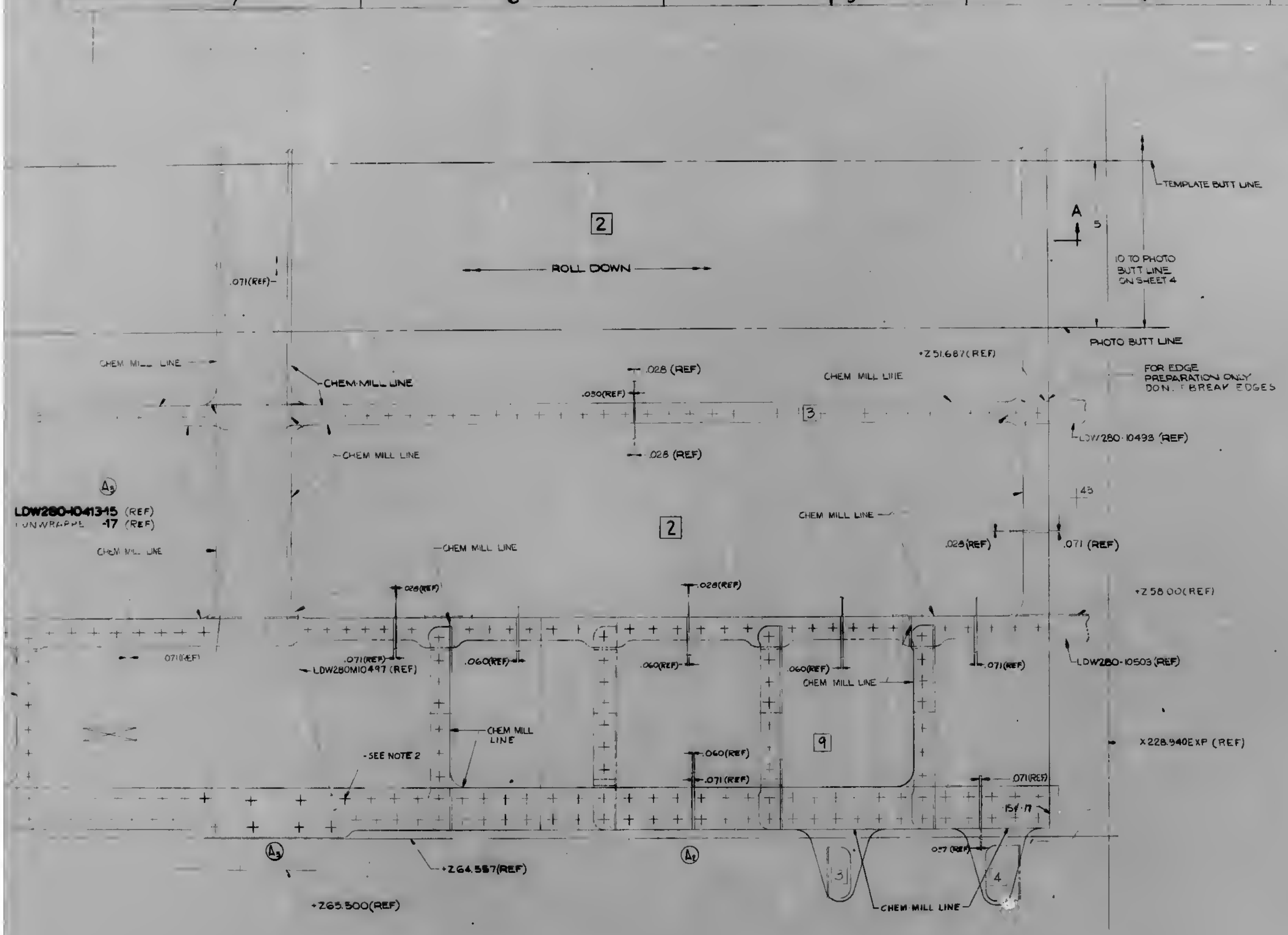
SECTION A-A
(NO SCALE)

01/03

NAS 9-1100

CODE IDENT NO 26512

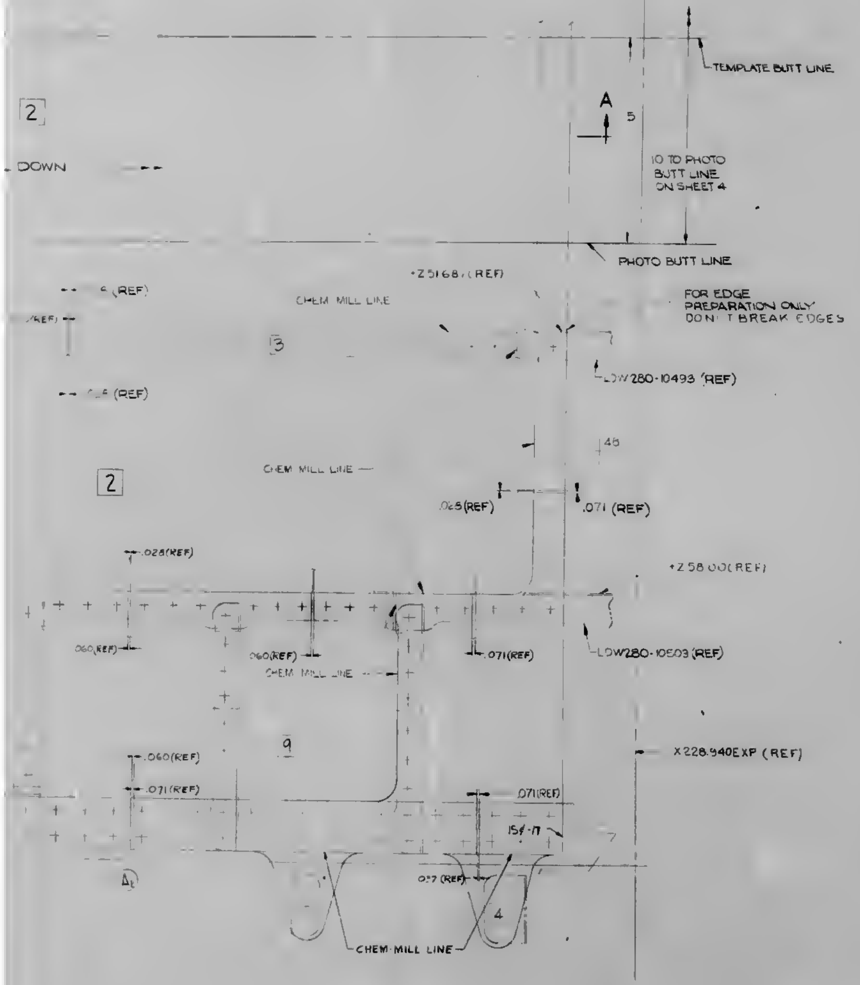
LDW280-10413 SHEET 3


2
ROLL DOWN
A
5
10 TO PHOTO BUTT LINE ON SHEET 4
TEMPLATE BUTT LINE
PHOTO BUTT LINE
.071(REF)
CHEM MILL LINE
CHEM MILL LINE
CHEM MILL LINE
.028 (REF)
.030(REF)
.028 (REF)
3
+Z 51.687(REF)
CHEM MILL LINE
FOR EDGE PREPARATION ONLY DON'T BREAK EDGES
LDW280-10493 (REF)
A3
LDW280-10413-15 (REF)
UNWRAPPED -17 (REF)
CHEM MILL LINE
CHEM MILL LINE
2
CHEM MILL LINE
45
.028(REF)
.071 (REF)
+Z 58.00(REF)
.028(REF)
.028(REF)
.071(REF)
.071(REF)
LDW280M10497 (REF)
.060(REF)
.060(REF)
.060(REF)
CHEM MILL LINE
.071(REF)
LDW280-10503 (REF)
CHEM MILL LINE
9
X228.940EXP (REF)
SEE NOTE 2
.060(REF)
.071(REF)
.071(REF)
15 & 17
.057(REF)
3
4
A3
A2
+Z64.587(REF)
+Z65.500(REF)
CHEM MILL LINE
7
6
5
4
3

NOTES
1. NO TOOLING HOLES PERMITTED IN PART
2. HOLE LOCATION FOR TOOLING PURPOSES ONLY
3. SIZE SHEET STOCK FROM .071 ± .003 TO $\frac{.071}{.068}$
4. WEIGHT OF -15 & -17 CHEM MILLED SKIN AS SHOWN (BUT NOT INCLUDING RIVET HOLES OR EXCESS MATERIAL FOR TOOLING) SHALL NOT EXCEED 4.25 [illegible]

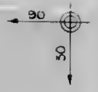
NAS 9-1100

CODE IDENT NO. 26512
LDW280-10413
SHEET 3



TEMPLATE BUTT LINE
A
5
10 TO PHOTO BUTT LINE ON SHEET 4
PHOTO BUTT LINE
2
DOWN
+Z 5168.(REF)
(REF)
(REF)
CHEM MILL LINE
FOR EDGE PREPARATION ONLY DON'T BREAK EDGES
3
LDW280-10493 (REF)
(REF)
.48
2
CHEM MILL LINE
.065(REF)
.071 (REF)
.028(REF)
+Z 58.00(REF)
.060(REF)
.060(REF)
.071(REF)
LDW280-10503 (REF)
CHEM MILL LINE
9
X 228.940 EXP (REF)
.060(REF)
.071(REF)
.071(REF)
15¼-17
.037 (REF)
4
CHEM-MILL LINE

NOTES
1 NO TOOLING HOLES PERMITTED IN PART
2. HOLE LOCATION FOR TOOLING PURPOSES ONLY
3 SIZE SHEET STOCK FROM .071 ± .003 TO $^{.071}_{.068}$
4 WEIGHT OF 15¼-17 CHEM-MILLED SKIN AS SHOWN (BUT NOT INCLUDING RIVET HOLES OR EXCESS MATERIAL FOR TOOLING) SHALL NOT EXCEED 6.45 POUNDS EACH.



LDW280-10413 -15¼-17

CHEM-MILL LINE TOLERANCE: ± 1/16 WHERE DEPTH OF ETCH IS .040 OR LESS (EXCEPT AS NOTED) ± 1/32 WHERE DEPTH OF ETCH IS GREATER THAN .040

SYMBOL	THICKNESS AFTER CHEM-MILLING	DEPTH OF CUT
1	.013 $^{+.003}_{-.001}$	.058(REF)
2	.028 ± .002	.043(REF)
3	.030 $^{+.003}_{-.002}$	.041(REF)
4	.037 ± .003	.034(REF)
5	.041 $^{+.004}_{-.003}$	.030(REF)
6	.044 ± .004	.027(REF)
7	.048 $^{+.005}_{-.004}$	.023(REF)
8	.055 ± .005	.016(REF)
9	.060 $^{+.006}_{-.003}$	.011(REF)

TOLERANCE ON LOFTED DIMENSIONS IS ± 1/32

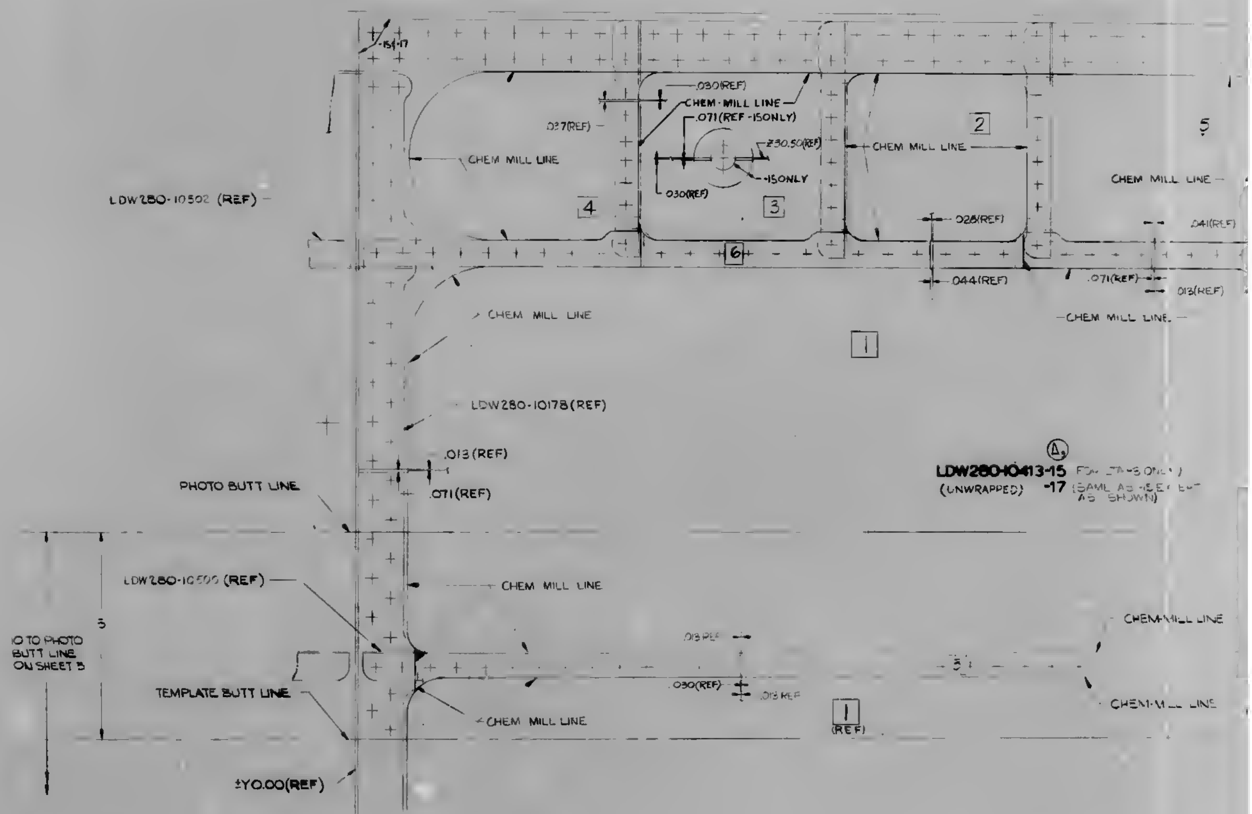
LDW280-10413 A

NAS 9-1100

CODE IDENT NO. 26512
LDW280-10413 SHEET 3

J 26512 LDW280-10413 A

K2


.15 & .17
LDW280-10502 (REF)
CHEM MILL LINE
.027(REF)
.030(REF)
CHEM-MILL LINE
.071(REF -15ONLY)
Z30.50(REF)
-15ONLY
.030(REF)
4
3
6
2
5
CHEM MILL LINE
CHEM MILL LINE
.028(REF)
.041(REF)
.044(REF)
.071(REF)
.013(REF)
CHEM MILL LINE
CHEM MILL LINE
1
LDW280-10178(REF)
.013 (REF)
.071(REF)
PHOTO BUTT LINE
LDW280-10500 (REF)
CHEM MILL LINE
5
10 TO PHOTO BUTT LINE ON SHEET 5
TEMPLATE BUTT LINE
CHEM MILL LINE
±Y0.00(REF)
.013 REF
.030(REF)
.013 REF
1
(REF)
5
CHEM-MILL LINE
CHEM-MILL LINE

Δ3

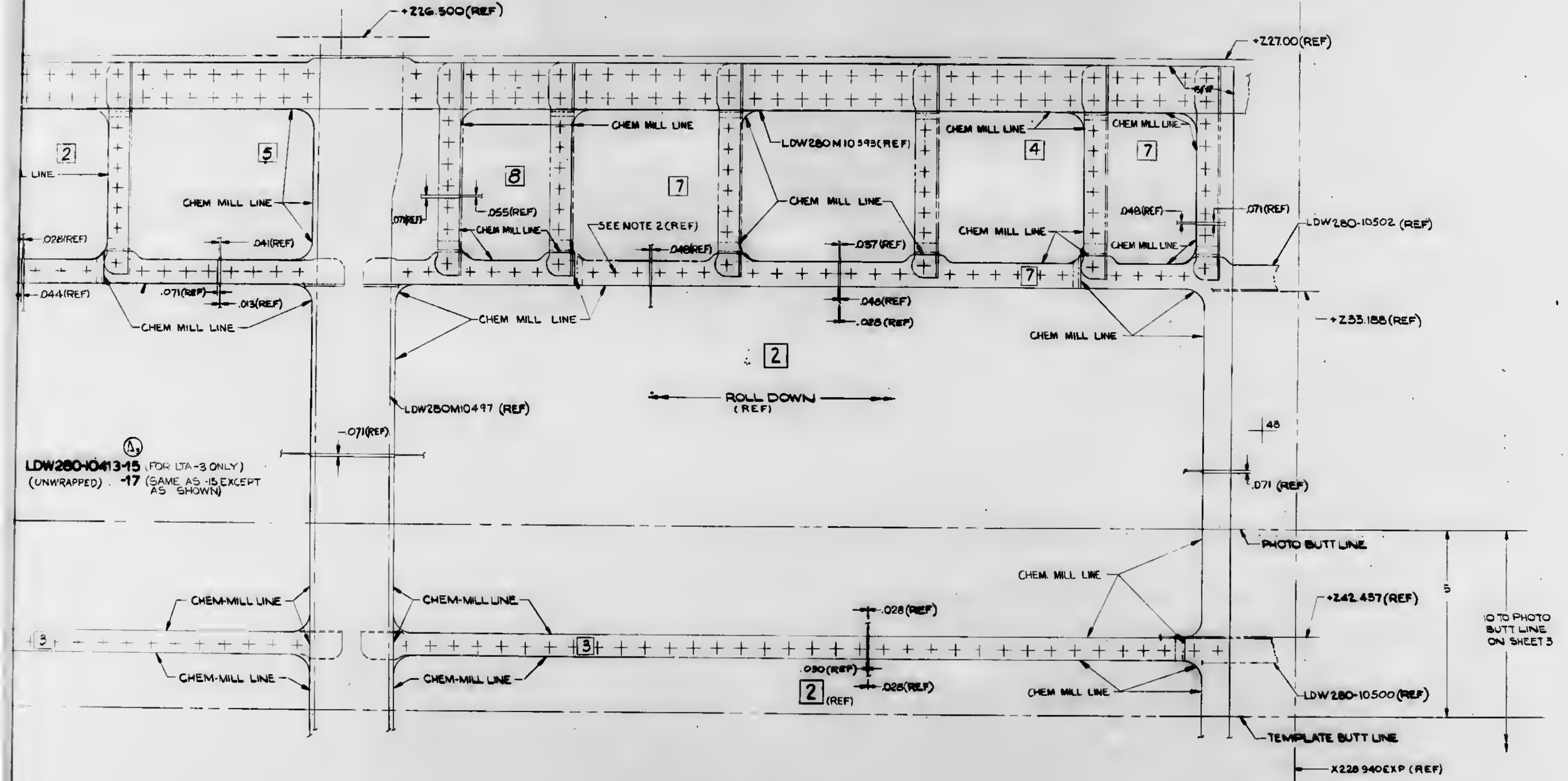
LDW280-10413-15 FOR [illegible] ONLY)
(UNWRAPPED) **-17** (SAME AS -15 EXCEPT AS SHOWN)

NAS 9-1100

CODE IDENT NO 26512

LDW280-10413 Sheet 4

01/03

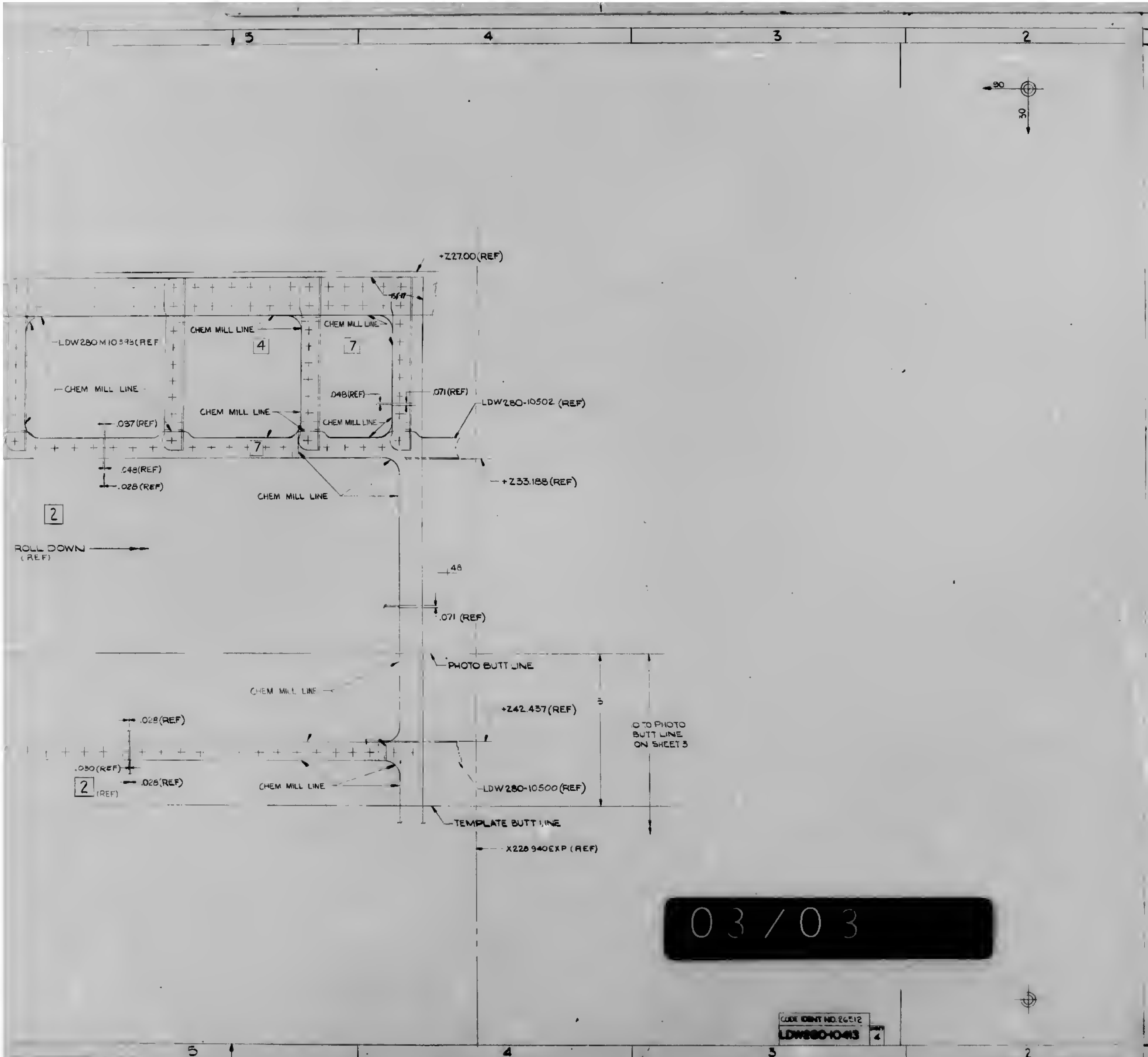

+Z26.500(REF)
+Z27.00(REF)
2
5
8
7
4
7
L LINE
CHEM MILL LINE
CHEM MILL LINE
LDW280M10593(REF)
CHEM MILL LINE
CHEM MILL LINE
CHEM MILL LINE
CHEM MILL LINE
.055(REF)
.071(REF)
CHEM MILL LINE
SEE NOTE 2(REF)
.048(REF)
CHEM MILL LINE
.048(REF)
.071(REF)
LDW280-10502 (REF)
CHEM MILL LINE
.028(REF)
.041(REF)
.037(REF)
7
.044(REF)
.071(REF)
.013(REF)
CHEM MILL LINE
CHEM MILL LINE
.048(REF)
.028(REF)
+Z33.188(REF)
CHEM MILL LINE
2
ROLL DOWN
(REF)
LDW280M10497 (REF)
48
.071(REF)
.071 (REF)
PHOTO BUTT LINE
CHEM. MILL LINE
CHEM-MILL LINE
CHEM-MILL LINE
.028(REF)
+Z42.437(REF)
5
10 TO PHOTO
BUTT LINE
ON SHEET 3
3
3
.030(REF)
.028(REF)
2 (REF)
CHEM-MILL LINE
CHEM-MILL LINE
CHEM MILL LINE
LDW280-10500(REF)
TEMPLATE BUTT LINE
X228.940EXP (REF)

A3

LDW280-10413-15 (FOR LTA-3 ONLY)
(UNWRAPPED) -17 (SAME AS -15 EXCEPT AS SHOWN)

[redacted]

NAS 9-1100


5
4
3
2
90
30
+Z27.00 (REF)
LDW280 M 10593 (REF
CHEM MILL LINE
CHEM MILL LINE
CHEM MILL LINE
4
7
7
CHEM MILL LINE
.048(REF)
.071 (REF)
LDW280-10502 (REF)
.037 (REF)
CHEM MILL LINE
CHEM MILL LINE
.048(REF)
.028 (REF)
+Z33.188 (REF)
CHEM MILL LINE
2
ROLL DOWN (REF)
.48
.071 (REF)
PHOTO BUTT LINE
CHEM MILL LINE
+Z42.437 (REF)
5
0 TO PHOTO BUTT LINE ON SHEET 3
.028(REF)
.030(REF)
.028(REF)
2 (REF)
CHEM MILL LINE
LDW280-10500 (REF)
TEMPLATE BUTT LINE
X228.940 EXP (REF)
5
4
3
2

03/03

CODE IDENT NO. 26512
LDW280-10413 4

F

E

D

LDW280-10413 A

LDW280-10413 A

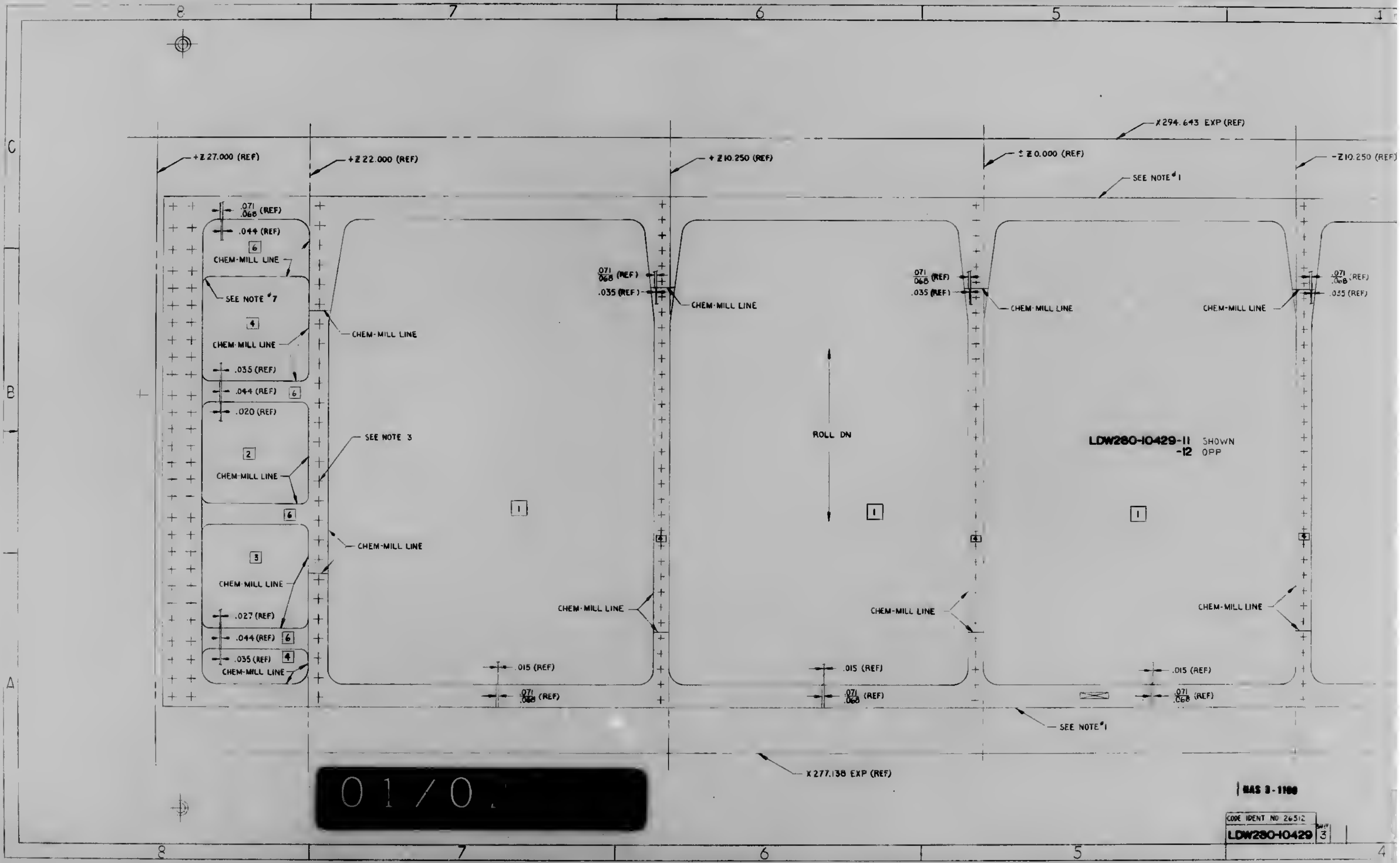
NAS 9-1100

J 26512 LDW280-10413 A

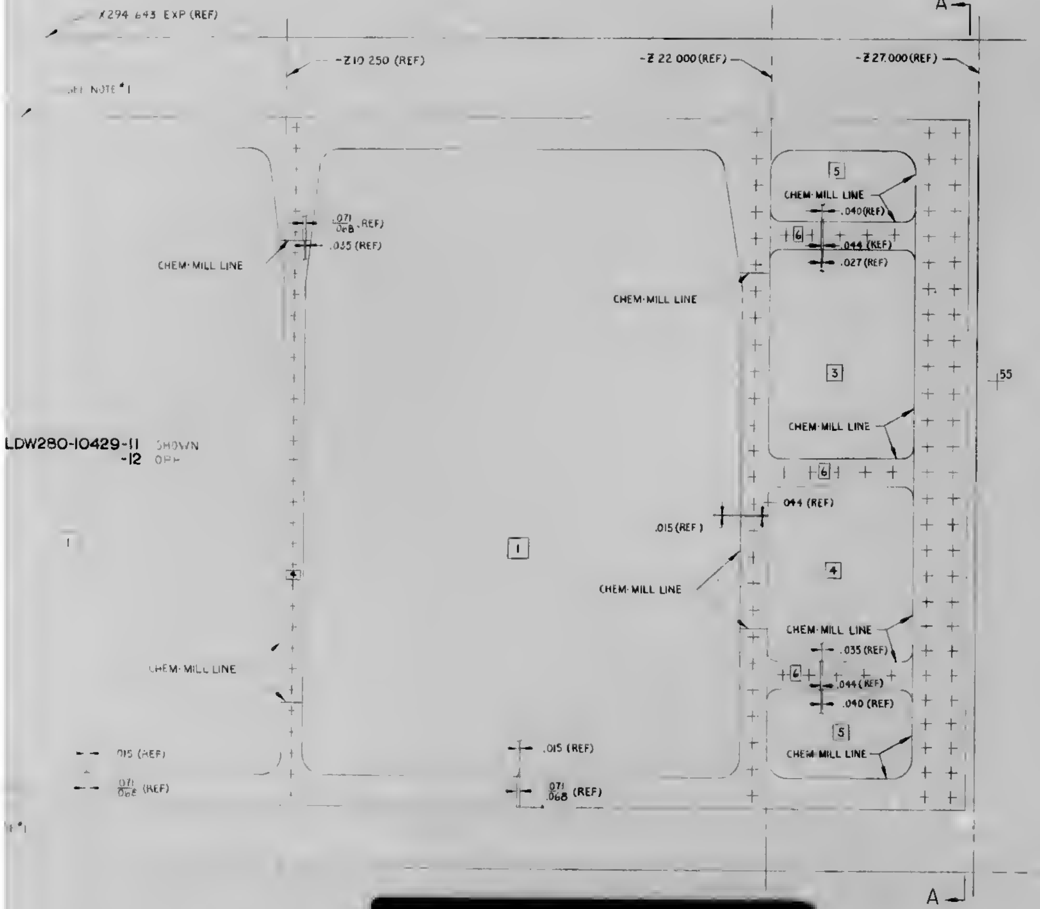
SHEET 4

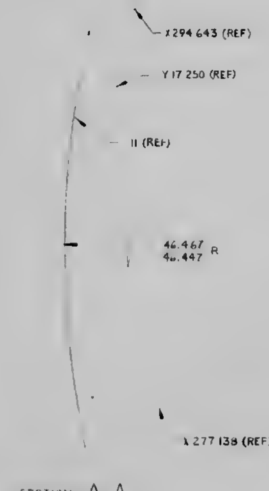
FOR PHOTO REPRODUCTION

K2


8
7
6
5
4
C
B
A
X 294.643 EXP (REF)
+Z 27.000 (REF)
+Z 22.000 (REF)
+Z 10.250 (REF)
± Z 0.000 (REF)
-Z 10.250 (REF)
SEE NOTE #1
.071 .068 (REF)
.044 (REF)
6
CHEM-MILL LINE
SEE NOTE #7
4
CHEM-MILL LINE
.035 (REF)
.044 (REF)
6
.020 (REF)
2
CHEM-MILL LINE
6
3
CHEM-MILL LINE
.027 (REF)
.044 (REF)
6
.035 (REF)
4
CHEM-MILL LINE
CHEM-MILL LINE
SEE NOTE 3
CHEM-MILL LINE
1
.015 (REF)
.071 .068 (REF)
.071 .068 (REF)
.035 (REF)
CHEM-MILL LINE
CHEM-MILL LINE
ROLL DN
1
.015 (REF)
.071 .068 (REF)
.071 .068 (REF)
.035 (REF)
CHEM-MILL LINE
CHEM-MILL LINE
LDW280-10429-11 SHOWN
-12 OPP
1
.015 (REF)
.071 .068 (REF)
.071 .068 (REF)
.035 (REF)
CHEM-MILL LINE
CHEM-MILL LINE
SEE NOTE #1
X 277.138 EXP (REF)
01/0
NAS 9-1100
CODE IDENT NO 26512
LDW280-10429
SHT 3

½


X294 643 EXP (REF)
-Z10 250 (REF)
-Z 22 000 (REF)
-Z 27.000 (REF)
A
SEE NOTE 1
.071/.068 (REF)
.035 (REF)
CHEM-MILL LINE
.040 (REF)
.044 (REF)
.027 (REF)
5
6
3
CHEM-MILL LINE
55
LDW280-10429-11 SHOWN
-12 OPP
.044 (REF)
.015 (REF)
1
4
CHEM-MILL LINE
.035 (REF)
.044 (REF)
.040 (REF)
.015 (REF)
.071/.068 (REF)


X294 643 (REF)
Y17 250 (REF)
11 (REF)
46.467
46.447 R
X277 138 (REF)

SECTION A-A
HALF SCALE

NOTES:

1. SKIN EDGES FOR WELD PREPARATION SHALL BE FOR SQUARE BUTT WELD DO NOT BREAK EDGES
2. NO TOOLING HOLES PERMITTED IN PARTS
3. HOLE LOCATIONS FOR TOOLING PURPOSES ONLY
4. WEIGHT OF -11 & -12 CHEM-MILLED PANELS AS SHOWN (NOT INCLUDING RIVET OR EXCESS MATERIAL FOR TOOLING) SHALL NOT EXCEED 2.30 POUNDS
5. SIZE SHEET STOCK FROM .071 ± .003 TO [illegible] BY CHEM-MILLING
6. UPON INITIAL RELEASE OF THIS DRAWING TOOLING FOR LDW280-10429-11 & -12 IS SIMILAR TO LDW280-10102-13 & -14
7. TOLERANCE ± .125 AT TANGENCY POINTS OF CHEM-MILL LINE CORNER RADII BETWEEN TWO ETCHED SURFACES

LDW280-10429-11 & -12

CHEM-MILL LINE TOLERANCE
± 1/16 WHERE DEPTH OF ETCH IS .040 OR LESS (EXCEPT AS NOTED)
± 1/32 WHERE DEPTH OF ETCH IS GREATER THAN .040

SYMBOL	THICKNESS AFTER CHEM-MILLING	DEPTH OF CUT
1	.015 ± .002	.056 (REF)
2	.020 ± .002	.051 (REF)
3	.027 +.003/-.002	.044 (REF)
4	.035 ± .003	.036 (REF)
5	.040 +.004/-.003	.031 (REF)
6	.044 +.004/-.003	.027 (REF)

MANUFACTURING OPERATIONS UNLESS OTHERWISE SPECIFIED NOTES CHECKED ✓ APPLY TO THIS DWG	
RUBBER STAMP PART NUMBER AND ALL OTHER MARKINGS BE [illegible] USE BOTH SIDES IF NECESSARY	✓
FILLET [illegible] INSIDE CORNER [illegible] TOLERANCES [illegible] ± .010 [illegible] ± .015 OVER .250R ± [illegible]	
DEPTH SHOWN FOR TAPPED HOLES IS FULL THDS 2.3 IMP THDS BEYOND PERMISSIBLE	
EXTERNAL THREAD LENGTH SHOWN INCLUDES 2 IMPERFECT THREADS MAX	
DO NOT CADMIUM PLATE & PAINT HOLES OR SURFACES MARKED WITH DOUBLE ASTERISK	
MISMATCH STEP OF ± .005 PERMISSIBLE DUE TO CHANGE OF CUTTERS AT INSIDE INTERSECTING SURFACES	
DIAMETERS MARKED MUST BE CONCENTRIC WITHIN FULL INDICATOR READING	
HOLES MUST BE KEPT FREE OF CHROME PLATING SOLUTION	
ALL DIMENSIONS SHOWN TO BE MET AFTER CADMIUM PLATING THICKNESS OF PLATE [illegible] TO [illegible] THICKNESS TO BE [illegible] ON THREADED AREAS NO ALLOWANCES FOR PLATING OF HOLES	
125 SURFACE ROUGHNESS INCLUDING REAMED HOLES PER MIL STD-10	
200 FOR ALL DRILLED HOLES	
REMOVE ALL BURRS BREAK ALL EDGES .005-.015	
INSPECTION INFORMATION ASTERISK PERMISSIBLE AVERAGE EDGE DISTANCE MARKED IS	
SYMBOL INDICATES SURFACE TO BE MACHINED	
UNLESS OTHERWISE SPECIFIED TOLERANCE ON FLANGES IS ± 1°30'	
LENGTHS OF AN [illegible] & [illegible] AL ALY RIVETS SHORTER THAN 1 INCH ARE NOT SPECIFIED	
TOLERANCE ON LOFTED DELINEATIONS IS ± 1/32	✓

NAS 9-1100

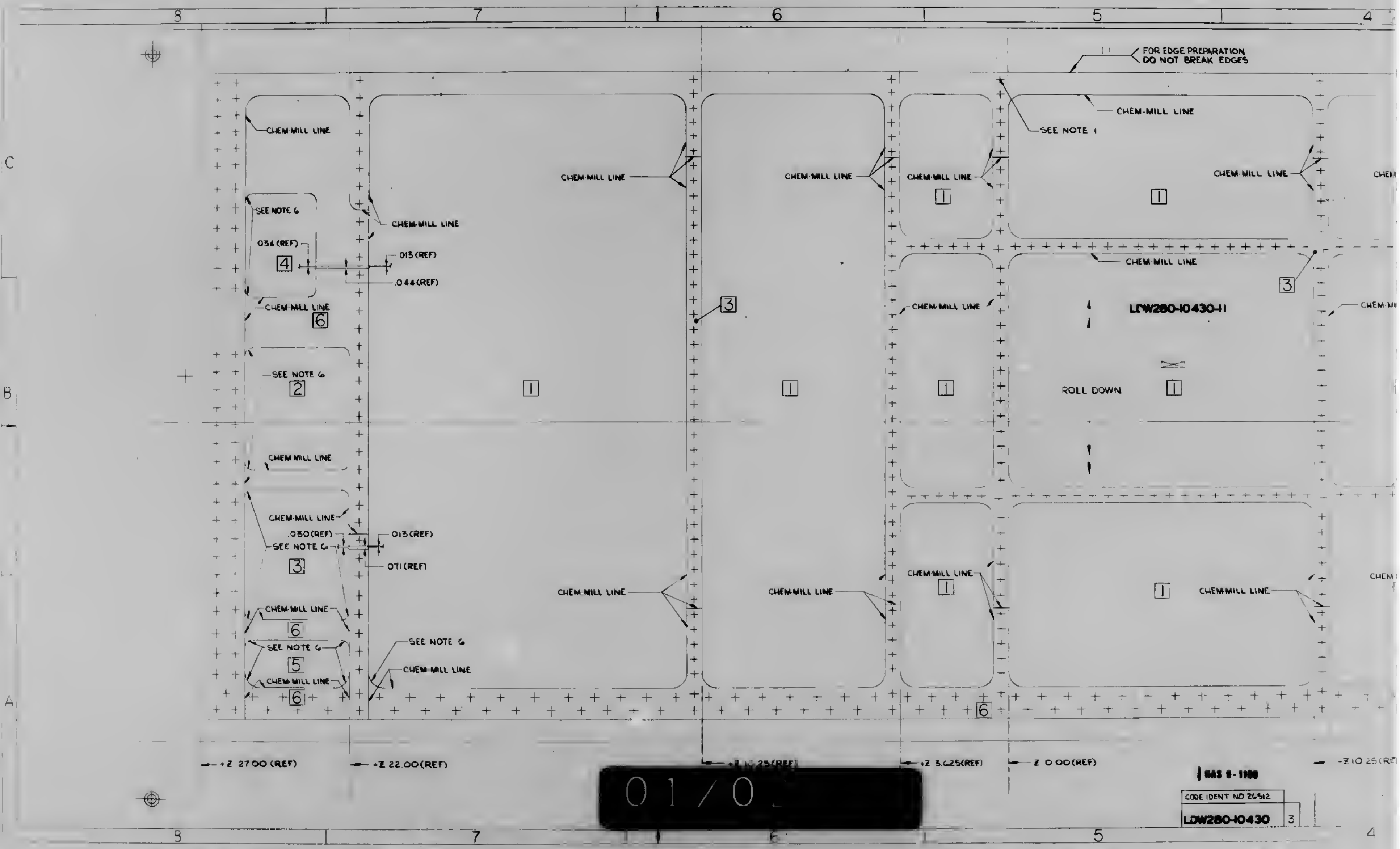
CODE IDENT NO 26512
LDW280-10429 SHEET 3

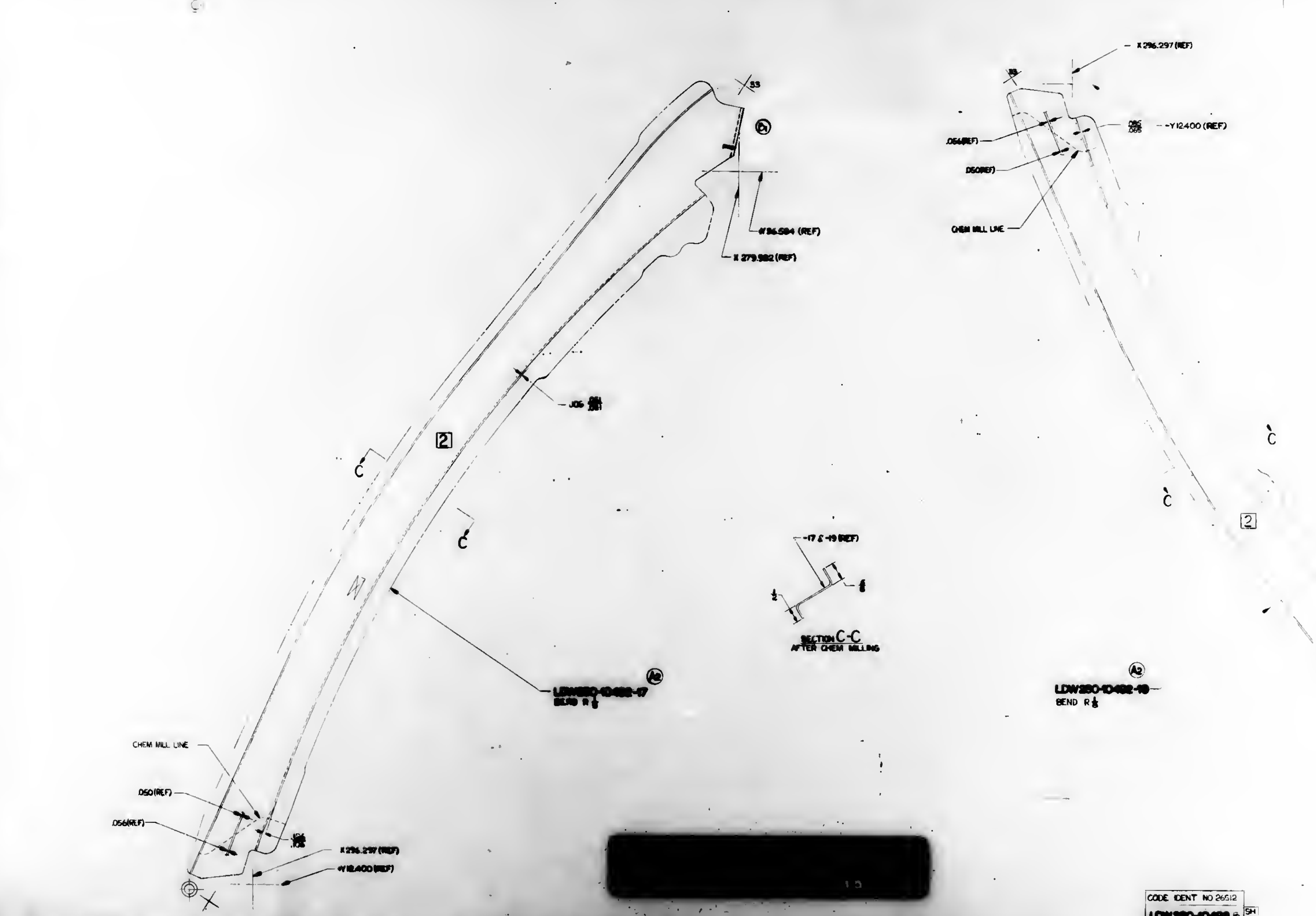
02/02

GRUMMAN AIRCRAFT ENGRG CORP BETHPAGE, L. I., NEW YORK

LEM	SIZE H	CODE IDENT NO. 26512	LDW280-10429	A
MODEL OR END ITEM	SCALE FULL & NOTED		SHEET 3	

FOR PHOTO REPRODUCTION K2

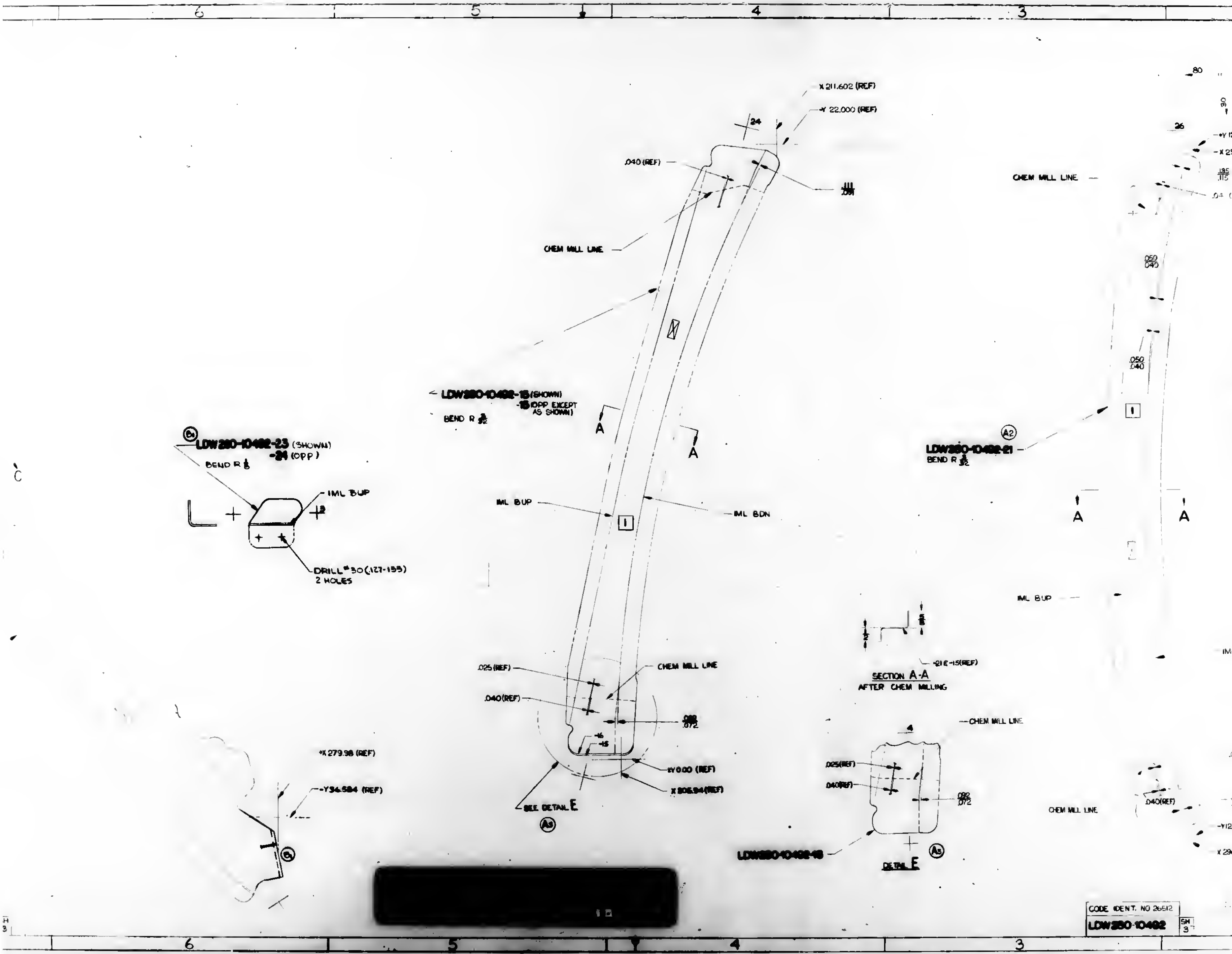

8
7
6
5
4
C
B
A
FOR EDGE PREPARATION
DO NOT BREAK EDGES
CHEM-MILL LINE
SEE NOTE 1
SEE NOTE 6
.034 (REF)
.013 (REF)
.044 (REF)
4
6
2
3
5
1
CHEM-MILL LINE
.030 (REF)
.013 (REF)
.071 (REF)
LDW280-10430-11
ROLL DOWN
+Z 27.00 (REF)
+Z 22.00 (REF)
+Z 10.25 (REF)
+Z 3.625 (REF)
Z 0.00 (REF)
-Z 10.25 (RE
NAS 9-1100
CODE IDENT NO 26512
LDW280-10430
3
01/0


33
A1
Y 96.584 (REF)
X 279.982 (REF)
.105 .091/.081
2
C
C
-17 & -19 (REF)
1/2
5/8
LDW280-10482-17
BEND R 1/8
A2
CHEM MILL LINE
.050(REF)
.056(REF)
.126/.105
X 296.297 (REF)
Y 12.400 (REF)
X 296.297 (REF)
33
.056(REF)
.086/.065
Y 12.400 (REF)
.050(REF)
CHEM MILL LINE
C
C
2
A2
LDW280-10482-19
BEND R 1/8

SECTION C-C
AFTER CHEM MILLING

[redacted]

CODE IDENT NO 26512
LDW280-10482 D SH 3


6
5
4
3
2
X 211.602 (REF)
Y 22.000 (REF)
24
.040 (REF)
.111
.091
CHEM MILL LINE
LDW280-10492-15 (SHOWN)
-16 (OPP EXCEPT AS SHOWN)
BEND R 3/32
A
A
IML BUP
IML BDN
1
B1
LDW280-10492-23 (SHOWN)
-24 (OPP)
BEND R 1/8
IML BUP
DRILL #30 (127-135) 2 HOLES
.025 (REF)
CHEM MILL LINE
.040 (REF)
.092
.072
.16
.15
Y 0.00 (REF)
X 305.94 (REF)
SEE DETAIL E
A3
X 279.98 (REF)
Y 34.584 (REF)
B1
SECTION A-A
AFTER CHEM MILLING
21 & 15 (REF)
4
CHEM MILL LINE
.025 (REF)
.040 (REF)
.092
.072
LDW280-10492-16
DETAIL E
A3
.80
.30
.26
Y 12.400 (REF)
X 296.297 (REF)
.135
.115
CHEM MILL LINE
.04 (REF)
.050
.040
.050
.040
1
A2
LDW280-10492-21
BEND R 3/32
A
A
IML BUP
IML BDN
.025 (REF)
.040 (REF)
CHEM MILL LINE
.135
.115
Y 12.400 (REF)
X 296.297 (REF)

[redacted]

NOTES:
1. NO TOOLING HOLE
LDW280-10492-
LDW280-10492-19
LDW280-10492-15

LDW280-10492-13,-15,-16,-19

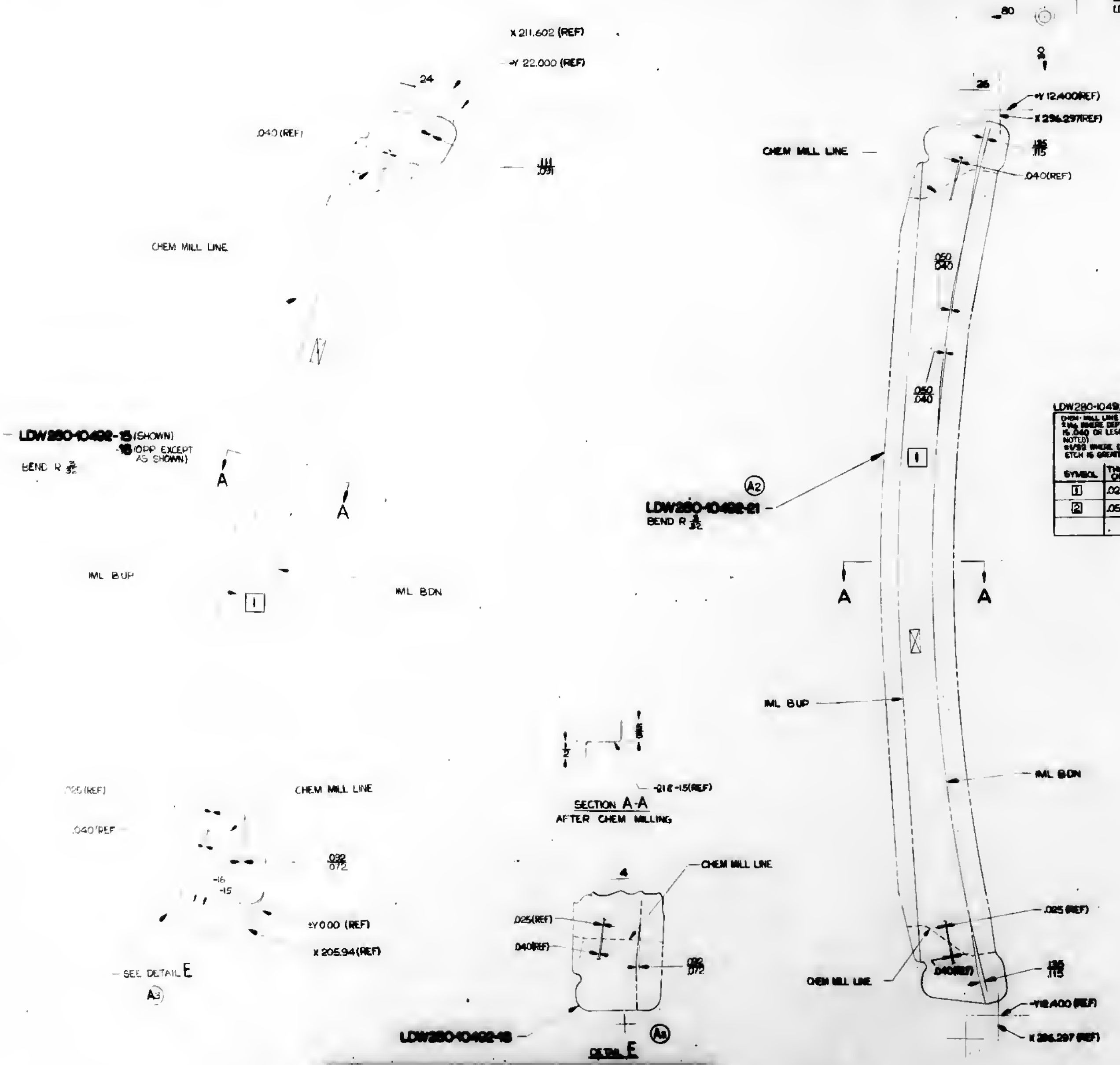
CHEM-MILL LINE TOLERANCE
±1/16 WHERE DEPTH OF ETCH IS .040 OR LESS EXCEPT AS NOTED
±1/32 WHERE DEPTH OF ETCH IS GREATER THAN .040

SYMBOL	THICKNESS AFTER CHEM-MILLING	
1	.025 ±.002	.095
2	.050 ±.002	.00

CODE IDENT. NO 26512
LDW280-10492
SH 3

NOTES
1. NO TOOLING HOLES PERMITTED IN PARTS
LDW280-10492-21 REPLACES LDW280 10309-13
LDW280-10492-18&-17 REPLACES LDW280-10233-11&-12
LDW280-10492-15&-16 REPLACES LDW280-10353-11&-12

MANUFACTURING OPERATIONS
UNLESS OTHERWISE SPECIFIED
NOTES CHECKED ✓ APPLY TO THIS DWG
RUBBERSTAMP PART NUMBER AND ALL OTHER MARKINGS IN REGION MARKED ▭ USE BOTH SIDES IF NECESSARY.
UNLESS OTHERWISE SPECIFIED TOLERANCE ON FLANGES IS ± 1/32 ✓
TOLERANCE ON LOFTED DELINEATIONS IS ± 1/32 ✓



X 211.602 (REF)
-Y 22.000 (REF)
24
.040 (REF)
.111 .091
CHEM MILL LINE
LDW280-10492-15 (SHOWN)
-16 (OPP EXCEPT AS SHOWN)
BEND R 3/32
A
A
IML BUP
1
IML BDN
.025 (REF)
CHEM MILL LINE
.040 (REF)
.092 .072
-16
-15
±Y0.00 (REF)
X 205.94 (REF)
SEE DETAIL E
A3
80
26
-Y 12.400 (REF)
X 296.297 (REF)
CHEM MILL LINE
.135 .115
.040 (REF)
.050 .040
.050 .040
1
A2
LDW280-10492-21
BEND R 3/32
A
A
IML BUP
IML BDN
1/2
5/8
-21 & -15 (REF)
SECTION A-A
AFTER CHEM MILLING
4
CHEM MILL LINE
.025 (REF)
.040 (REF)
.092 .072
LDW280-10492-18
DETAIL E
A3
.025 (REF)
CHEM MILL LINE
.040 (REF)
.135 .115
-Y 12.400 (REF)
X 286.297 (REF)

LDW280-10492-21,-15,-16 & -19, -17

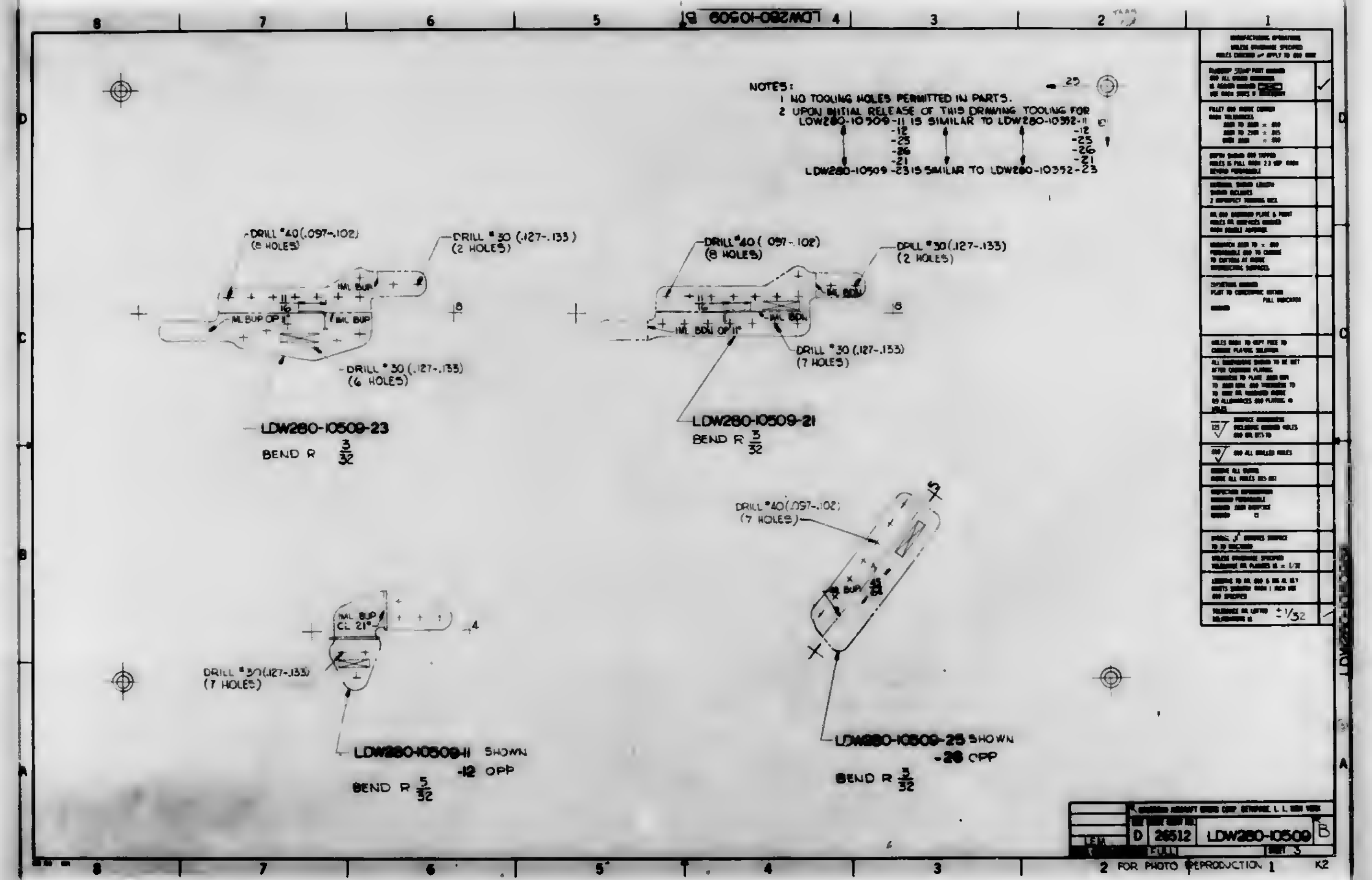
CHEM-MILL LINE TOLERANCE ± 1/16 WHERE DEPTH OF ETCH IS .040 OR LESS (EXCEPT AS NOTED) ± 1/32 WHERE DEPTH OF ETCH IS GREATER THAN .040		
SYMBOL	THICKNESS AFTER CHEM-MILLING	* DEPTH OF CUT
1	.025 ± .002	.015 REF
2	.050 ± .002	.006 REF

[redacted]

CODE IDENT. NO 26512
LDW280-10492
3

GRUMMAN AIRCRAFT ENG CORP
26512 | J | LDW280-10492 | E
SCALE FULL
3.00

FOR PHOTO REPRODUCTION SUPERSEDES LDW280-10492 K2



LDW280-10509 B
DRILL #40 (.097-.102) (8 HOLES)
DRILL #30 (.127-.133) (2 HOLES)
IML BUP
IML BUP OP 11°
IML BUP
11/16
.18
DRILL #30 (.127-.133) (6 HOLES)
LDW280-10509-23
BEND R 3/32
DRILL #40 (.097-.102) (8 HOLES)
DRILL #30 (.127-.133) (2 HOLES)
IML BDN
IML BDN OP 11°
IML BDN
.18
DRILL #30 (.127-.133) (7 HOLES)
LDW280-10509-21
BEND R 3/32
DRILL #40 (.097-.102) (7 HOLES)
IML BUP
45 1/2°
LDW280-10509-25 SHOWN
-26 OPP
BEND R 3/32
IML BUP
CL 21°
.4
DRILL #30 (.127-.133) (7 HOLES)
LDW280-10509-11 SHOWN
-12 OPP
BEND R 5/32
±1/32
D
26512
LDW280-10509
B
SHEET 3
FOR PHOTO REPRODUCTION
K2

NOTES:

1 NO TOOLING HOLES PERMITTED IN PARTS.

2 UPON INITIAL RELEASE OF THIS DRAWING TOOLING FOR LDW280-10509-11 IS SIMILAR TO LDW280-10352-11

-12 / -12

-25 / -25

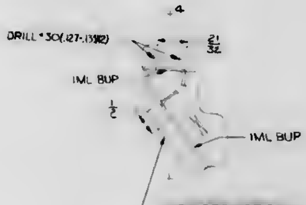
-26 / -26

-21 / -21

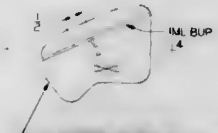
LDW280-10509-23 IS SIMILAR TO LDW280-10352-23

01

NAS 9-1100


DRILL #30(.127-.133)(2)
.4
21/32
IML BUP
1/2
IML BUP

LDW280-10513-11
BEND R 3/32

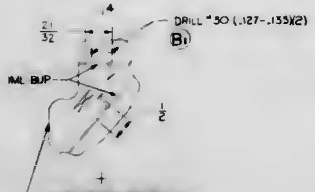


LDW280-10513-13 (SHOWN)
BEND R 3/32 **-14** (OPP)

NOTES:

1. NO TOOLING HOLES PERMITTED IN PARTS.
2. UPON INITIAL RELEASE OF THIS DWG TOOLING FOR
   LDW280-10513-11 IS SIMILAR TO LDW280-10254-11
   LDW280-10513-13 IS SIMILAR TO LDW280-10254-13
   LDW280-10513-14 IS SIMILAR TO LDW280-10254-14
   LDW280-10513-15 IS SIMILAR TO LDW280-10254-15

.25
.15


.4
DRILL #30 (.127-.133)(2)
B1
21/32
IML BUP
1/2

LDW280-10513-15
BEND R 3/32

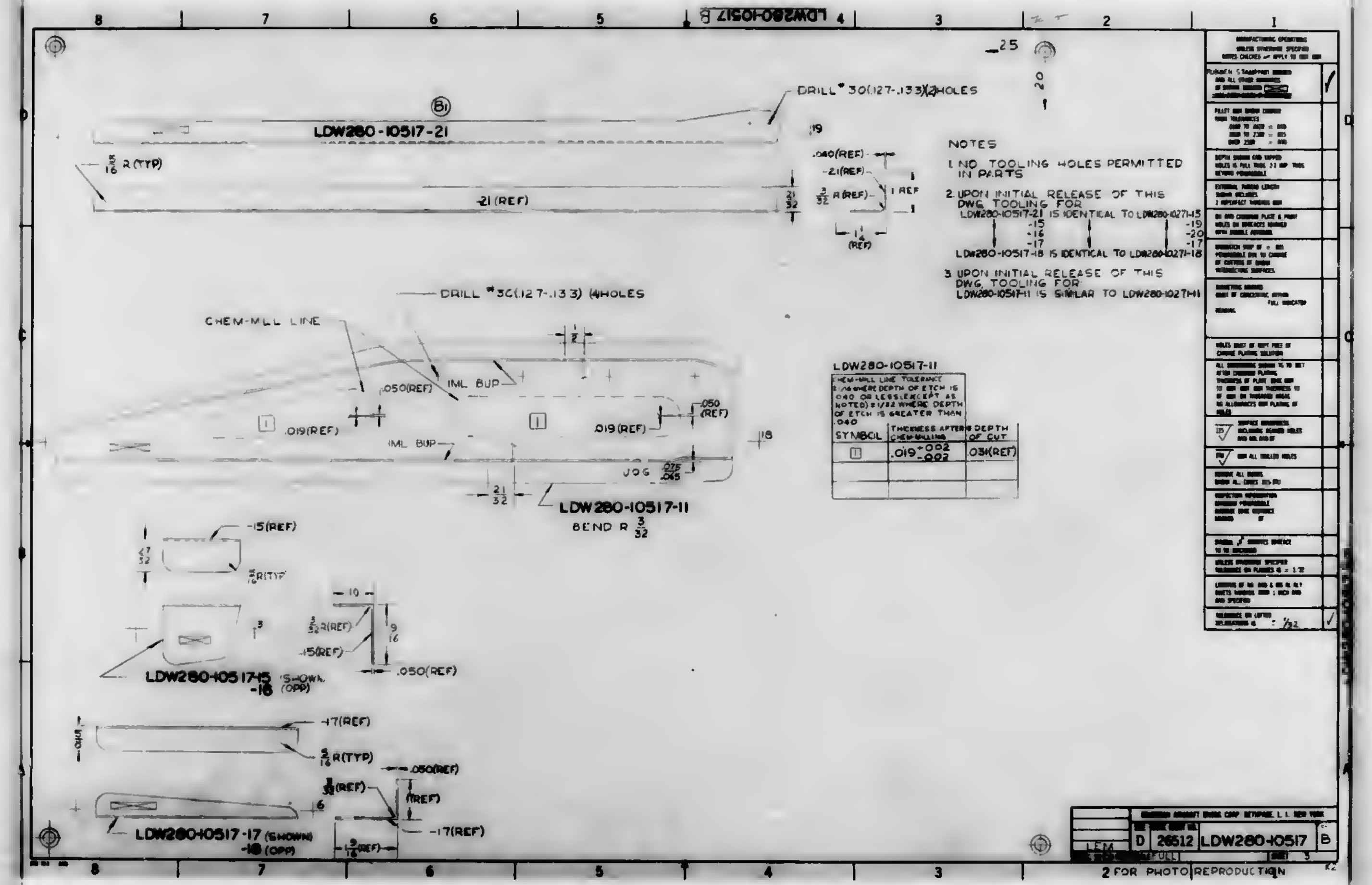
± 1/32

D 26512 **LDW280-10513** B

SHEET 3

FOR PHOTO REPRODUCTION

NAS 9-1100


LDW280-10517 B
B1
DRILL #30(.127-.133)(2)HOLES
LDW280-10517-21
5/16 R (TYP)
.21 (REF)
21/32
.19
.040(REF)
.21(REF)
3/32 R(REF)
1 REF
1 1/4 (REF)
.25
.20
DRILL #30(.127-.133) (4)HOLES
CHEM-MILL LINE
IML BUP
.050(REF)
.019(REF)
IML BUP
.019 (REF)
.050 (REF)
.18
JOG .075 .045
21/32
LDW280-10517-11
BEND R 3/32
.15(REF)
27/32
5/16 R(TYP)
.10
3/32 R(REF)
.15(REF)
9/16
.050(REF)
.3
LDW280-10517-15 (SHOWN)
-16 (OPP)
.17(REF)
5/16 R(TYP)
.050(REF)
3/32 (REF)
1(REF)
.17(REF)
.6
9/16 (REF)
LDW280-10517-17 (SHOWN)
-18 (OPP)
LEM
D
26512
LDW280-10517
B
FULL
SHEET 3

NOTES

1. NO TOOLING HOLES PERMITTED IN PARTS

2. UPON INITIAL RELEASE OF THIS DWG TOOLING FOR
LDW280-10517-21 IS IDENTICAL TO LDW280-10271-13
-15 -19
-16 -20
-17 -17
LDW280-10517-18 IS IDENTICAL TO LDW280-10271-18

3. UPON INITIAL RELEASE OF THIS DWG, TOOLING FOR LDW280-10517-11 IS SIMILAR TO LDW280-10271-11

LDW280-10517-11

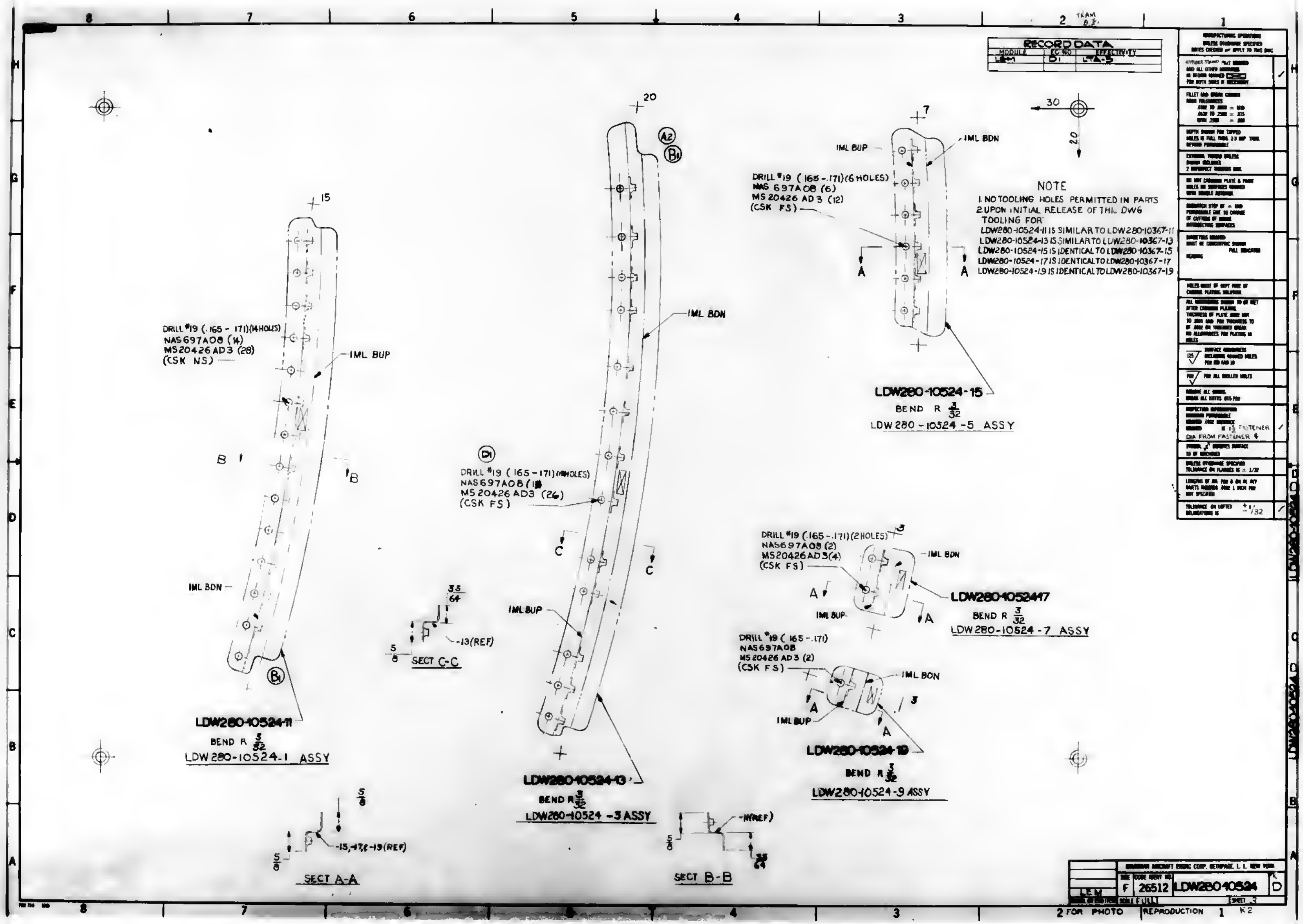
CHEM-MILL LINE TOLERANCE ±1/16 WHERE DEPTH OF ETCH IS .040 OR LESS (EXCEPT AS NOTED) ±1/32 WHERE DEPTH OF ETCH IS GREATER THAN .040

SYMBOL	THICKNESS AFTER CHEM-MILLING	DEPTH OF CUT
1	$.019^{+.002}_{-.002}$	.031(REF)

2 FOR PHOTO REPRODUCTION

NAS 9-1100

01



DRILL #19 (.165 - .171)(14 HOLES)
NAS697A08 (14)
MS20426 AD3 (28)
(CSK NS)
IML BUP
IML BDN
B
B
LDW280-10524-11
BEND R 3/32
LDW 280-10524-1 ASSY
SECT A-A
-15,-17,&-19(REF)
5/8
SECT C-C
-13(REF)
35/64
D1
DRILL #19 (.165 - .171)(13 HOLES)
NAS697A08 (13)
MS20426 AD3 (26)
(CSK FS)
A2
B1
C
C
IML BUP
LDW280-10524-13
BEND R 3/32
LDW280-10524 -3 ASSY
SECT B-B
-11(REF)
DRILL #19 (.165 - .171)(6 HOLES)
NAS 697A08 (6)
MS 20426 AD3 (12)
(CSK FS)
IML BUP
IML BDN
A
A
LDW280-10524-15
BEND R 3/32
LDW 280 - 10524 -5 ASSY
DRILL #19 (.165 - .171)(2 HOLES)
NAS697A08 (2)
MS20426 AD3(4)
(CSK FS)
LDW280-10524-17
BEND R 3/32
LDW 280-10524 -7 ASSY
DRILL #19 (.165 - .171)
NAS697A08
MS 20426 AD3 (2)
(CSK FS)
IML BON
IML BUP
LDW280-10524-19
BEND R 3/32
LDW280-10524-9 ASSY
30
20

RECORD DATA		
MODULE	EC NO	EFFECTIVITY
LEM	D1	LTA-5

NOTE

1. NO TOOLING HOLES PERMITTED IN PARTS
2. UPON INITIAL RELEASE OF THIS DWG TOOLING FOR
LDW280-10524-11 IS SIMILAR TO LDW280-10367-11
LDW280-10524-13 IS SIMILAR TO LDW280-10367-13
LDW280-10524-15 IS IDENTICAL TO LDW280-10367-15
LDW280-10524-17 IS IDENTICAL TO LDW280-10367-17
LDW280-10524-19 IS IDENTICAL TO LDW280-10367-19

TEAM D.F.

IS 1½ FASTENER DIA FROM FASTENER ¢

TOLERANCE ON LOFTED DELINEATIONS IS ±1/32

GRUMMAN AIRCRAFT ENGRG CORP. BETHPAGE, L. I. NEW YORK

LEM

SIZE F | CODE IDENT NO 26512 | LDW280-10524 | D

SCALE FULL | SHEET 3

FOR PHOTO REPRODUCTION

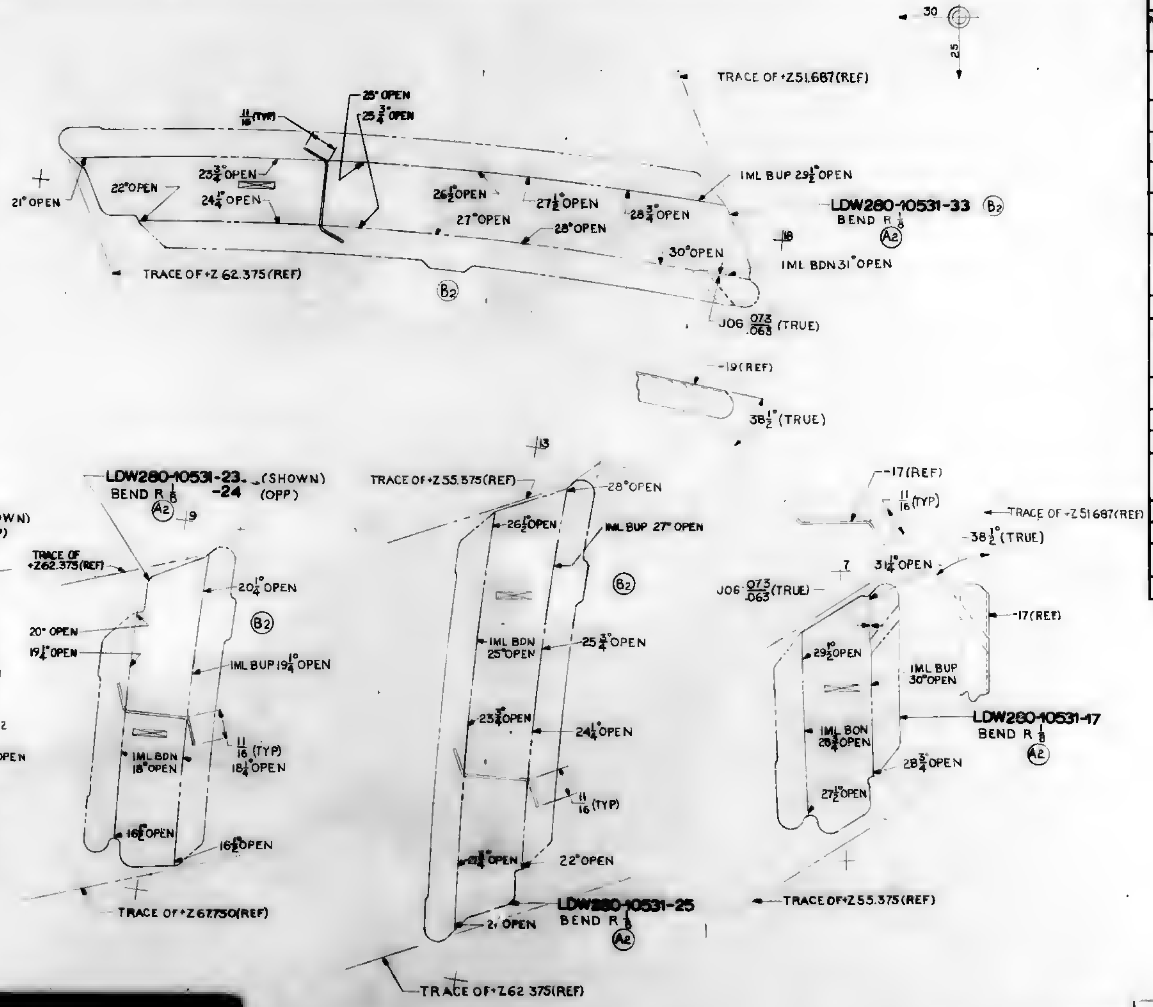
K2

NAS 9-1100

NOTE:

1. NO TOOLING HOLES PERMITTED IN PARTS
2. UPON INITIAL RELEASE OF THIS DWG TOOLING FOR

LDW280-10531-31 IS SIMILAR TO	LDW280-10236-11
-22	-12
-23	-13
-24	-14
-25	-15
-17	-17
LDW280-10531-33 IS SIMILAR TO	LDW280-10236-19



30
25
TRACE OF +Z51.687(REF)
25° OPEN
25¾° OPEN
11/16 (TYP)
21° OPEN
22°OPEN
23¾°OPEN
24¼°OPEN
26½°OPEN
27°OPEN
27½°OPEN
28°OPEN
28¾°OPEN
IML BUP 29½°OPEN
LDW280-10531-33
BEND R 1/8
B2
A2
18
30°OPEN
IML BDN 31°OPEN
TRACE OF +Z 62.375(REF)
J06 .073/.063 (TRUE)
-19(REF)
38½° (TRUE)
LDW280-10531-31 (SHOWN)
-22 (OPP)
BEND R 1/8
TRACE OF +Z 67.750(REF)
9
15½°OPEN
16°OPEN
15½°OPEN
FP-31
IML BDN 14° OPEN
FP-22
IML BUP 14°OPEN
11/16 (TYP)
12¾°OPEN
12½°OPEN
12°OPEN
11½°OPEN
TRACE OF +Y 12.40(REF)
LDW280-10531-23 (SHOWN)
-24 (OPP)
TRACE OF +Z62.375(REF)
20¼°OPEN
20° OPEN
19¼°OPEN
IML BUP 19¼°OPEN
IML BDN 18°OPEN
18¼°OPEN
16½°OPEN
16¼°OPEN
TRACE OF +Z67.750(REF)
13
TRACE OF +Z55.375(REF)
28°OPEN
26½°OPEN
IML BUP 27° OPEN
IML BDN 25°OPEN
25¾°OPEN
23¾°OPEN
24¼°OPEN
21¾°OPEN
22°OPEN
21°OPEN
LDW280-10531-25
BEND R 1/8
TRACE OF +Z62.375(REF)
-17(REF)
TRACE OF +Z51.687(REF)
38½° (TRUE)
7
31¼°OPEN
J06 .073/.063 (TRUE)
29½°OPEN
-17(REF)
IML BUP 30°OPEN
LDW280-10531-17
BEND R 1/8
IML BDN 28¾°OPEN
28¾°OPEN
27½°OPEN
TRACE OF +Z55.375(REF)

01

NAS 9-1100

GRUMMAN AIRCRAFT ENG'G CORP, BETHPAGE, L. I., NEW YORK

SIZE	CODE IDENT NO		
F	26512	LDW280-10531	B

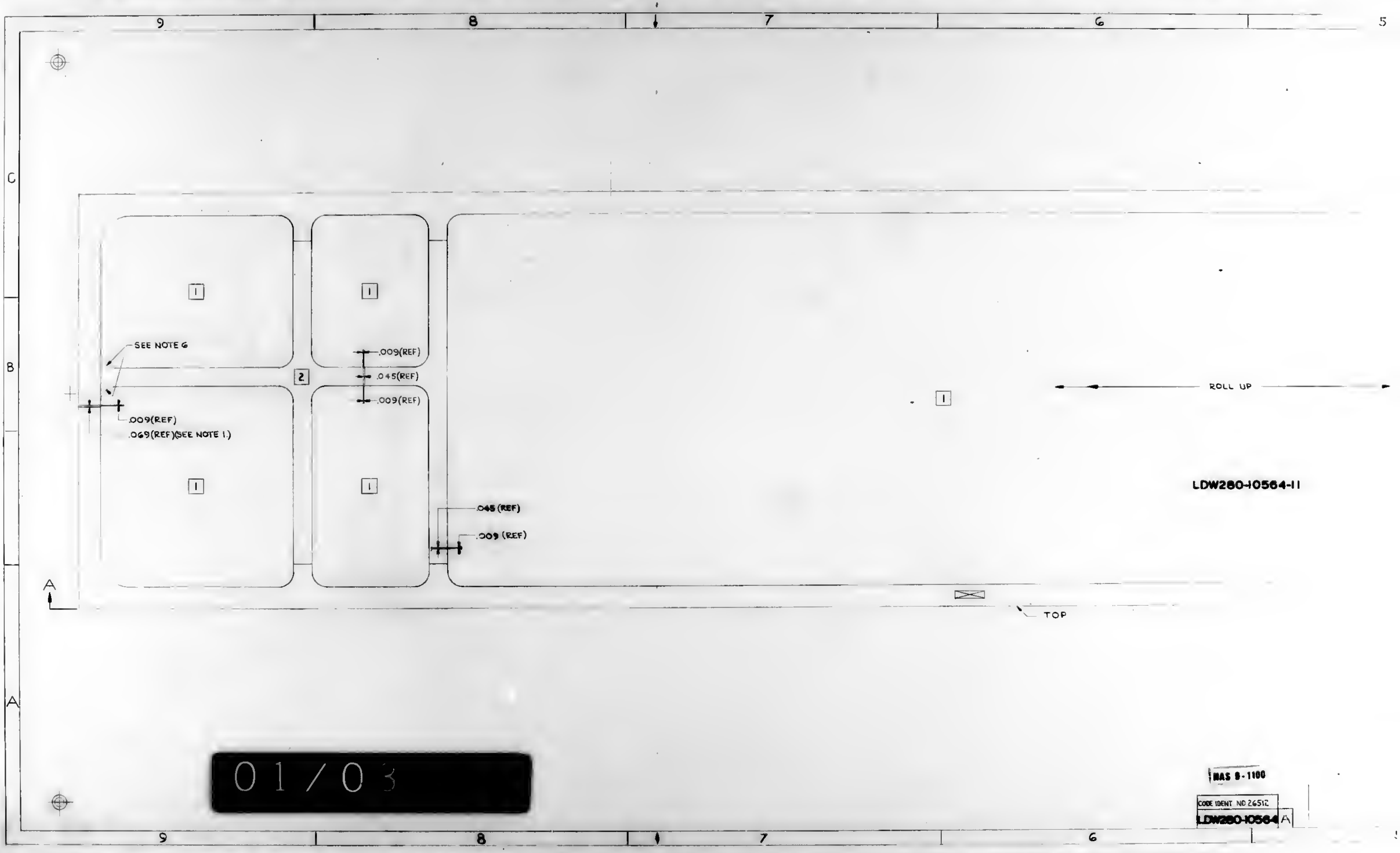
LEM

SCALE FULL

SHEET 3

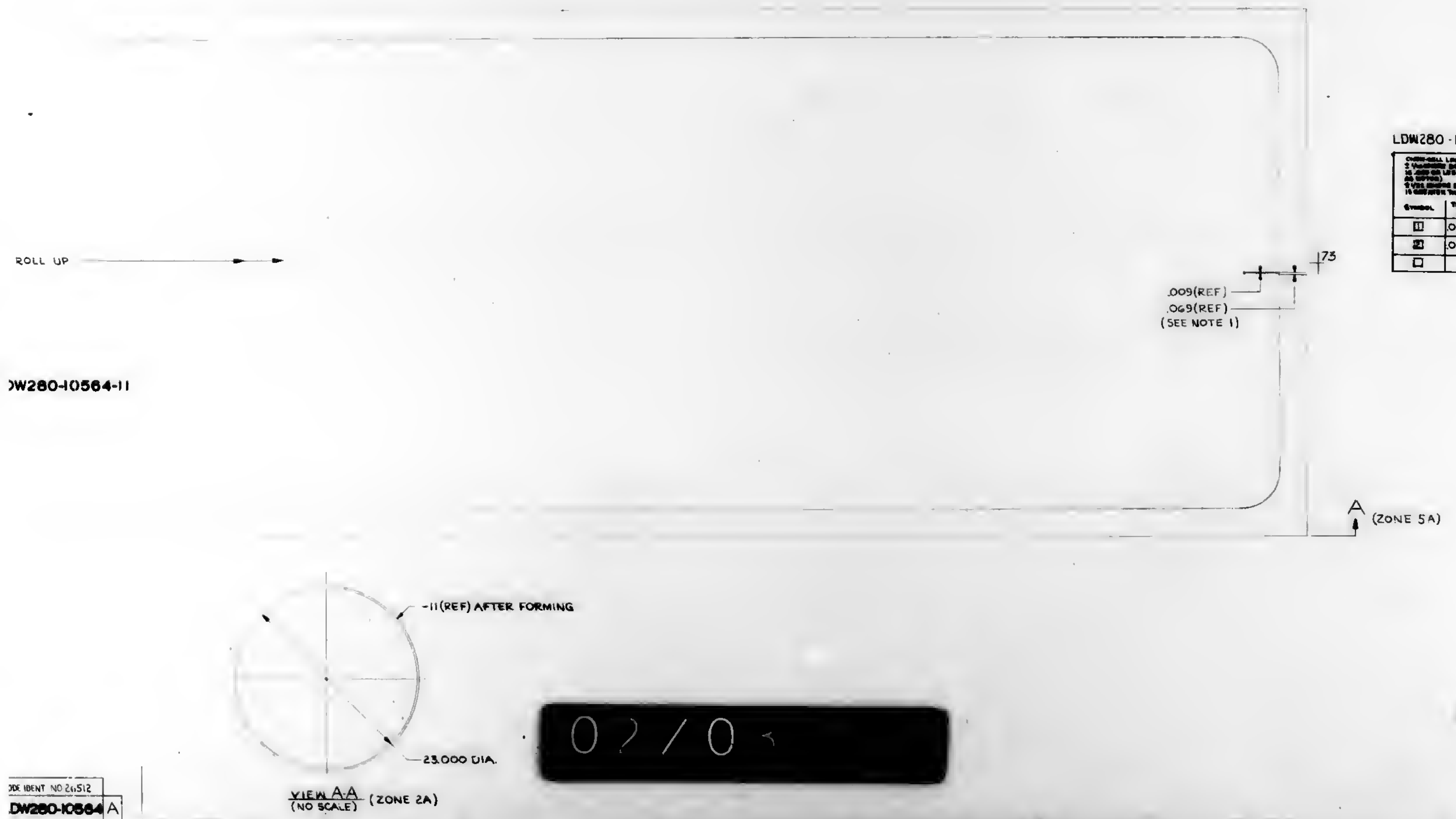
FOR PHOTO REPRODUCTION

K2


SEE NOTE 6
.009(REF)
.069(REF)(SEE NOTE 1.)
.009(REF)
.045(REF)
.009(REF)
.045 (REF)
.009 (REF)
1
2
ROLL UP
LDW280-10564-11
TOP
A
9
8
7
6
5
C
B
A
NAS 9-1100
CODE IDENT NO 26512
LDW280-10564 A

01/03

NOTES
1. SIZE SHEET STOCK FROM .071 ± .003 TO $\frac{.071}{.068}$
2. WELD PREPARATION SHOULD BE FOR SQUARE BUTT WELD, DO NOT BREAK EDGES.
3 NO TOOLING HOLES PERMITTED IN PARTS
4. UPON INITIAL RELEASE OF THIS DWG TOOLING FOR LDW280-10564-11 IS SIMILAR TO LDW280-10208-11, REV A3
5. WEIGHT OF -11 CHEM-MILLED PANEL AFTER FINAL TRIM (BUT BEFORE RIVET HOLES ARE DRILLED) SHALL NOT EXCEED POUNDS.
6. TOLERANCE ± 125 AT TANGENCY POINTS OF CHEM-MILL LINE CORNER RADII BETWEEN TWO ETCHED SURFACES.


5
4
3
2
1
80
25
ROLL UP
LDW280-10564-11
.73
.009(REF)
.069(REF)
(SEE NOTE 1)
A (ZONE 5A)
-11(REF) AFTER FORMING
23.000 DIA.
VIEW AA
(NO SCALE) (ZONE 2A)
02/0

LDW280-10564-11

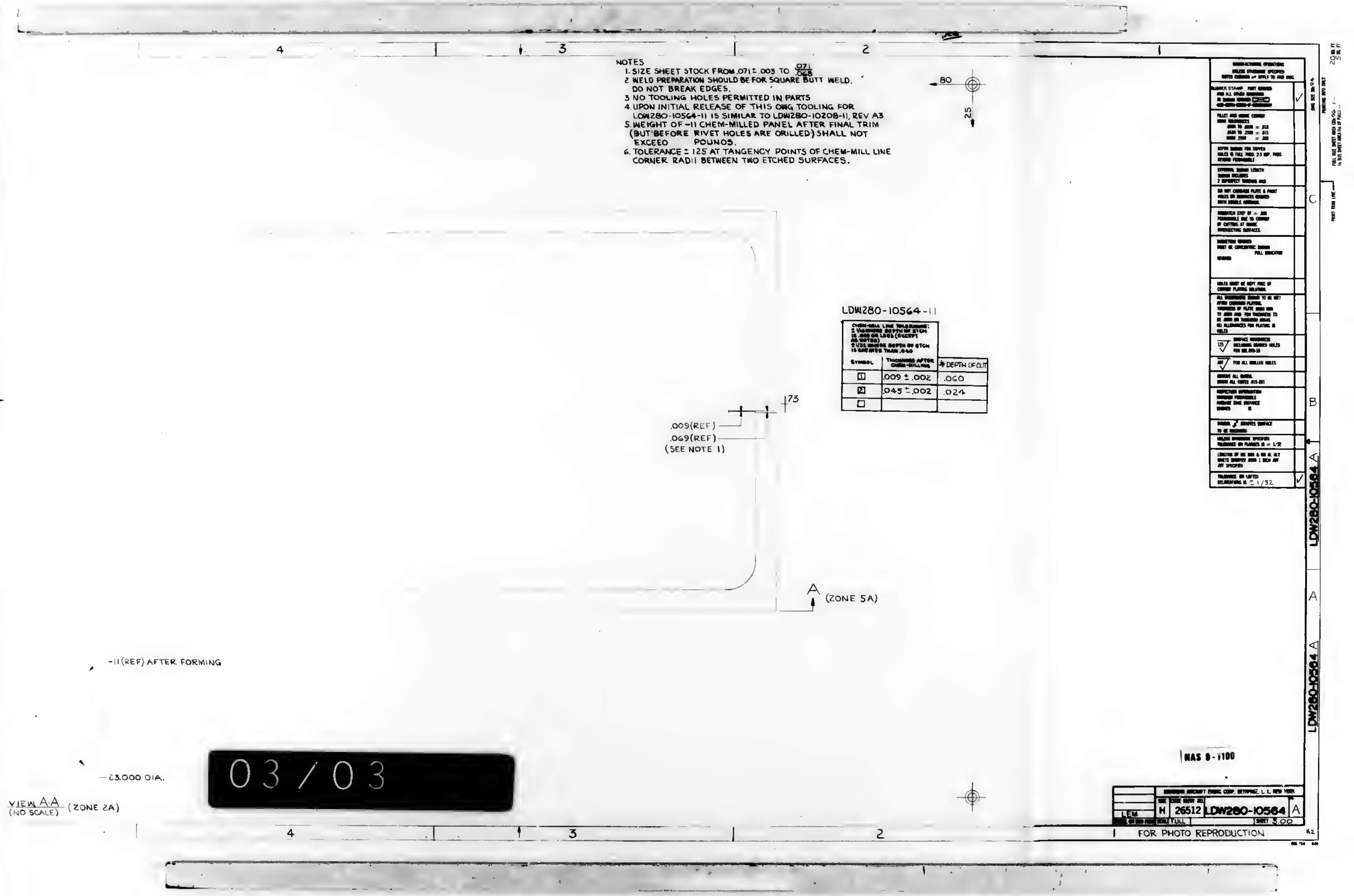
[illegible]

SYMBOL	THICKNESS AFTER CHEM-MILLING	* DEPTH OF CUT
1	.009 ± .002	.060
2	.045 ± .002	.024
☐		

NAS 6-1100

CODE IDENT NO 26512
LDW280-10564 A

LEM
SIZE H
FOR PH


4
3
2
1
C
B
A
80
25
.73
.009(REF)
.069(REF)
(SEE NOTE 1)
A
(ZONE 5A)
-11(REF) AFTER FORMING
—⌀3.000 DIA.
VIEW A-A
(NO SCALE)
(ZONE 2A)
03/03
LDW280-10564 A
K2

NOTES

1. SIZE SHEET STOCK FROM .071 ± .003 TO $\frac{.071}{.068}$
2. WELD PREPARATION SHOULD BE FOR SQUARE BUTT WELD. DO NOT BREAK EDGES.
3. NO TOOLING HOLES PERMITTED IN PARTS
4. UPON INITIAL RELEASE OF THIS DWG TOOLING FOR LDW280-10564-11 IS SIMILAR TO LDW280-10208-11, REV A3
5. WEIGHT OF -11 CHEM-MILLED PANEL AFTER FINAL TRIM (BUT BEFORE RIVET HOLES ARE DRILLED) SHALL NOT EXCEED POUNDS.
6. TOLERANCE ± .125 AT TANGENCY POINTS OF CHEM-MILL LINE CORNER RADII BETWEEN TWO ETCHED SURFACES.

LDW280-10564-11

CHEM-MILL LINE TOLERANCE: ± 1/16 WHERE DEPTH OF ETCH IS .060 OR LESS (EXCEPT AS NOTED) ± 1/32 WHERE DEPTH OF ETCH IS GREATER THAN .040

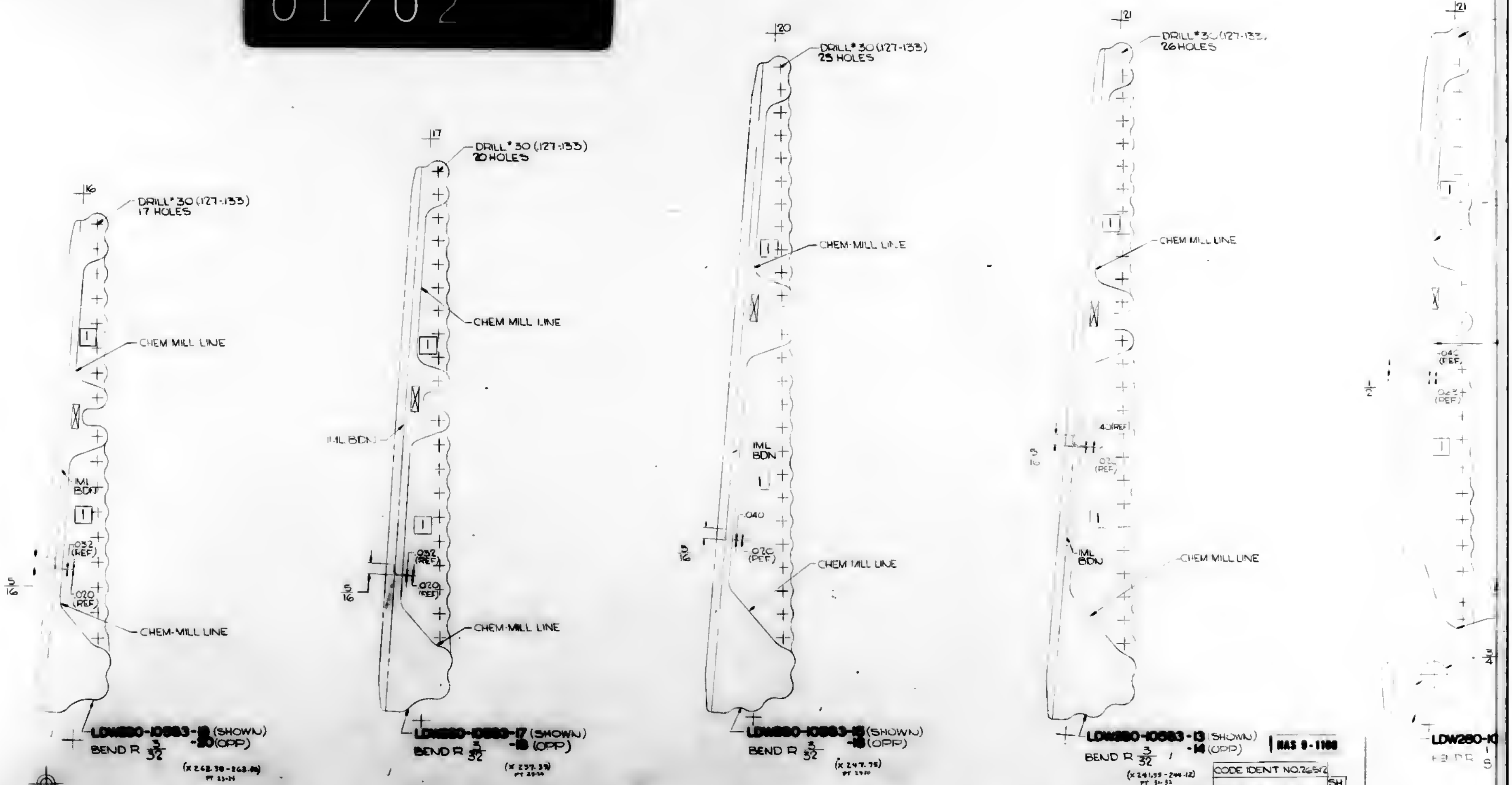
SYMBOL	THICKNESS AFTER CHEM-MILLING	* DEPTH OF CUT
1	.009 ± .002	.060
2	.045 ± .002	.024
☐		

NAS 9-1100

	GRUMMAN AIRCRAFT ENG. CORP. BETHPAGE, L. I., NEW YORK			
LEM	SIZE H	CODE IDENT NO. 26512	LDW280-10564	A
	SCALE FULL		SHEET 3.00	

FOR PHOTO REPRODUCTION

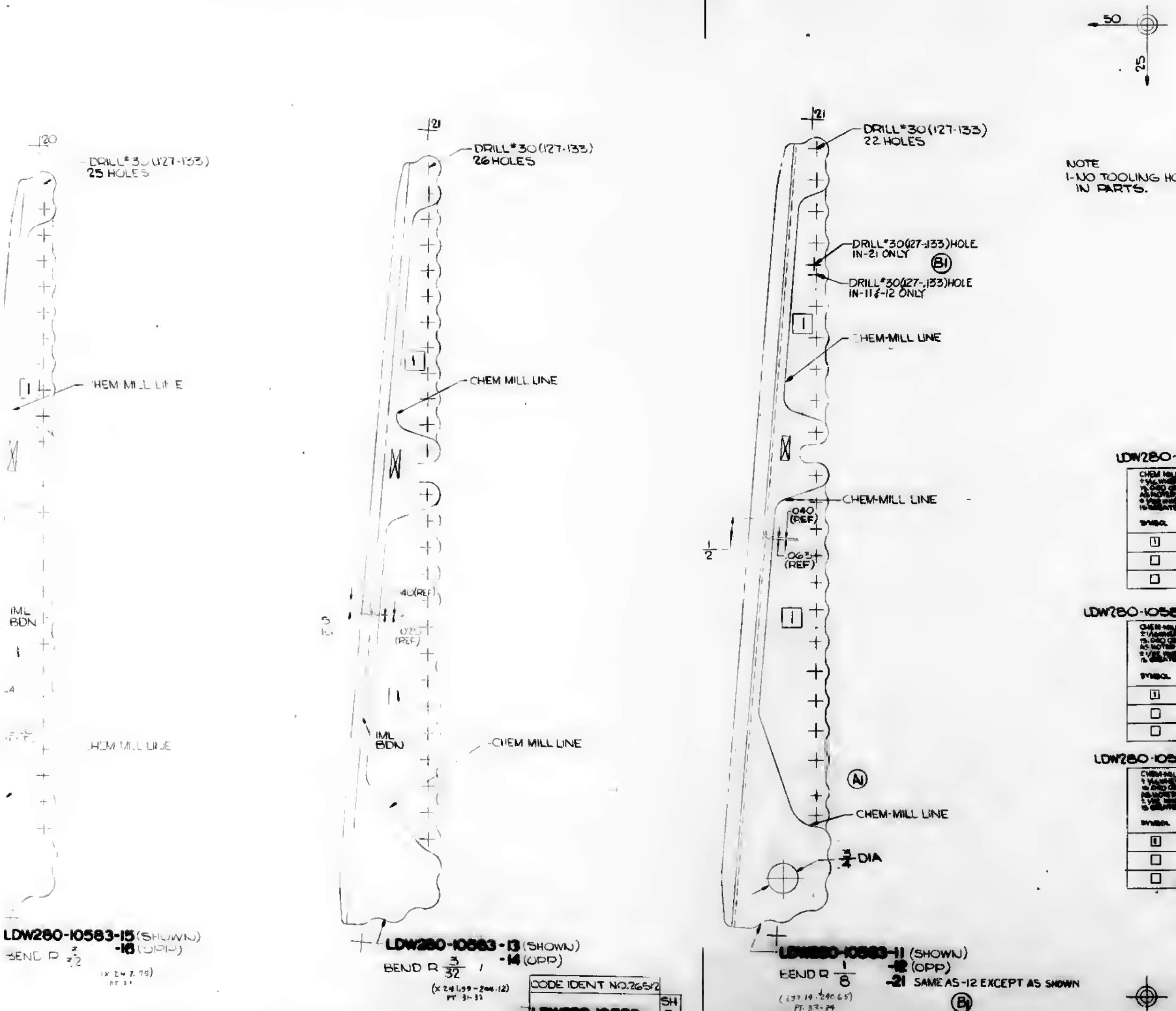
01/02


16
DRILL #30 (.127-.133)
17 HOLES
CHEM MILL LINE
IML BDN
.032 (REF)
.020 (REF)
5/16
CHEM-MILL LINE
LDW280-10583-19 (SHOWN)
-20 (OPP)
BEND R 3/32
(X 262.30-263.00)
PT 23-24
17
DRILL #30 (.127-.133)
20 HOLES
CHEM MILL LINE
IML BDN
.032 (REF)
.020 (REF)
5/16
CHEM-MILL LINE
LDW280-10583-17 (SHOWN)
-18 (OPP)
BEND R 3/32
(X 237.39)
PT 29-30
20
DRILL #30 (.127-.133)
23 HOLES
CHEM-MILL LINE
IML BDN
.040
.020 (REF)
5/16
CHEM MILL LINE
LDW280-10583-15 (SHOWN)
-16 (OPP)
BEND R 3/32
(X 247.75)
PT 29-30
21
DRILL #30 (.127-.133)
26 HOLES
CHEM MILL LINE
.040 (REF)
.020 (REF)
5/16
IML BDN
CHEM MILL LINE
LDW280-10583-13 (SHOWN)
-14 (OPP)
BEND R 3/32
(X 241.59-244.12)
PT 31-32
21
.040 (REF)
.020 (REF)
1/2
3/4
LDW280-1
BEND R 1/8

NAS 9-1100

CODE IDENT NO. 26512

LDW280-10583 SH 3


4
3
2
50
25
20
DRILL #30 (127-133)
25 HOLES
HEM MILL LINE
IML BDN
HEM MILL LINE
LDW280-10583-15 (SHOWN)
-16 (OPP)
BEND R 3/32
(X 24 7.75)
21
DRILL #30 (127-133)
26 HOLES
CHEM MILL LINE
.40 (REF)
.025 (REF)
IML BDN
CHEM MILL LINE
LDW280-10583-13 (SHOWN)
-14 (OPP)
BEND R 3/32
(X 241.99-246.12)
PT 31-32
21
DRILL #30 (127-133)
22 HOLES
DRILL #30 (127-133) HOLE IN -21 ONLY
B1
DRILL #30 (127-133) HOLE IN -11 & -12 ONLY
CHEM-MILL LINE
CHEM-MILL LINE
.040 (REF)
.063 (REF)
1/2
A1
CHEM-MILL LINE
3/4 DIA
LDW280-10583-11 (SHOWN)
-12 (OPP)
-21 SAME AS -12 EXCEPT AS SHOWN
B1
BEND R 1/8
(237.19-240.65)
PT 33-34

NOTE
1- NO TOOLING HOLES PERMITTED IN PARTS.

LDW280-10583-11,-12 & -21

CHEM MILL LINE TOLERANCE ± 1/16 WHERE DEPTH OF ETCH IS .020 OR LESS (EXCEPT AS NOTED) ± 1/8 WHERE DEPTH OF ETCH IS GREATER THAN .040

SYMBOL	THICKNESS AFTER CHEM-MILLING	DEPTH OF CUT
1	.040 ± .003	.023 (REF)
☐		
☐		

LDW280-10583-13,-14,-15 & -16

CHEM-MILL LINE TOLERANCE ± 1/16 WHERE DEPTH OF ETCH IS .020 OR LESS (EXCEPT AS NOTED) ± 1/8 WHERE DEPTH OF ETCH IS GREATER THAN .040

SYMBOL	THICKNESS AFTER CHEM-MILLING	DEPTH OF CUT
1	.020 $^{+.003}_{-.002}$	.020 (REF)
☐		
☐		

LDW280-10583-17,-18,-19 & -20

CHEM-MILL LINE TOLERANCE ± 1/16 WHERE DEPTH OF ETCH IS .020 OR LESS (EXCEPT AS NOTED) ± 1/8 WHERE DEPTH OF ETCH IS GREATER THAN .040

SYMBOL	THICKNESS AFTER CHEM-MILLING	DEPTH OF CUT
1	.020 $^{+.003}_{-.002}$	.012 (REF)
☐		
☐		

CODE IDENT NO. 26512
LDW280-10583 SH 3

MANUFACTURING OPERATIONS
UNLESS OTHERWISE SPECIFIED
NOTES CHECKED ✓ APPLY TO THIS DWG.
TOLERANCE ON LOFTED DIMENSIONS IS ± 1/32

LDW280-10583 B

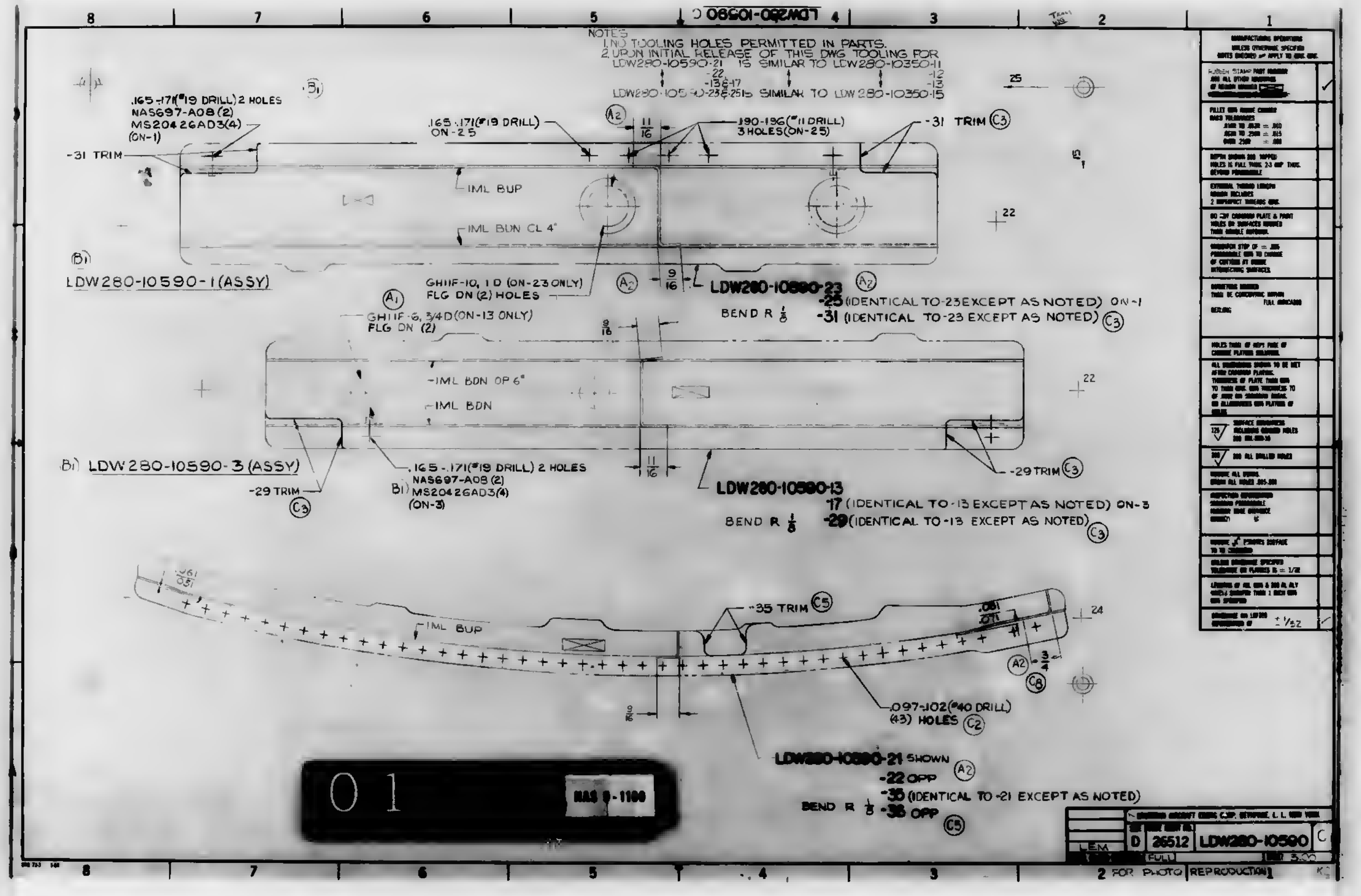
0 2 / 0

NAS 9-1100

GRUMMAN AIRCRAFT ENGINEERING CORP. BETHPAGE, L. I., NEW YORK
H 26512 LDW280-10583 B
SCALE FULL
SHEET 3

FOR PHOTO REPRODUCTION

K2

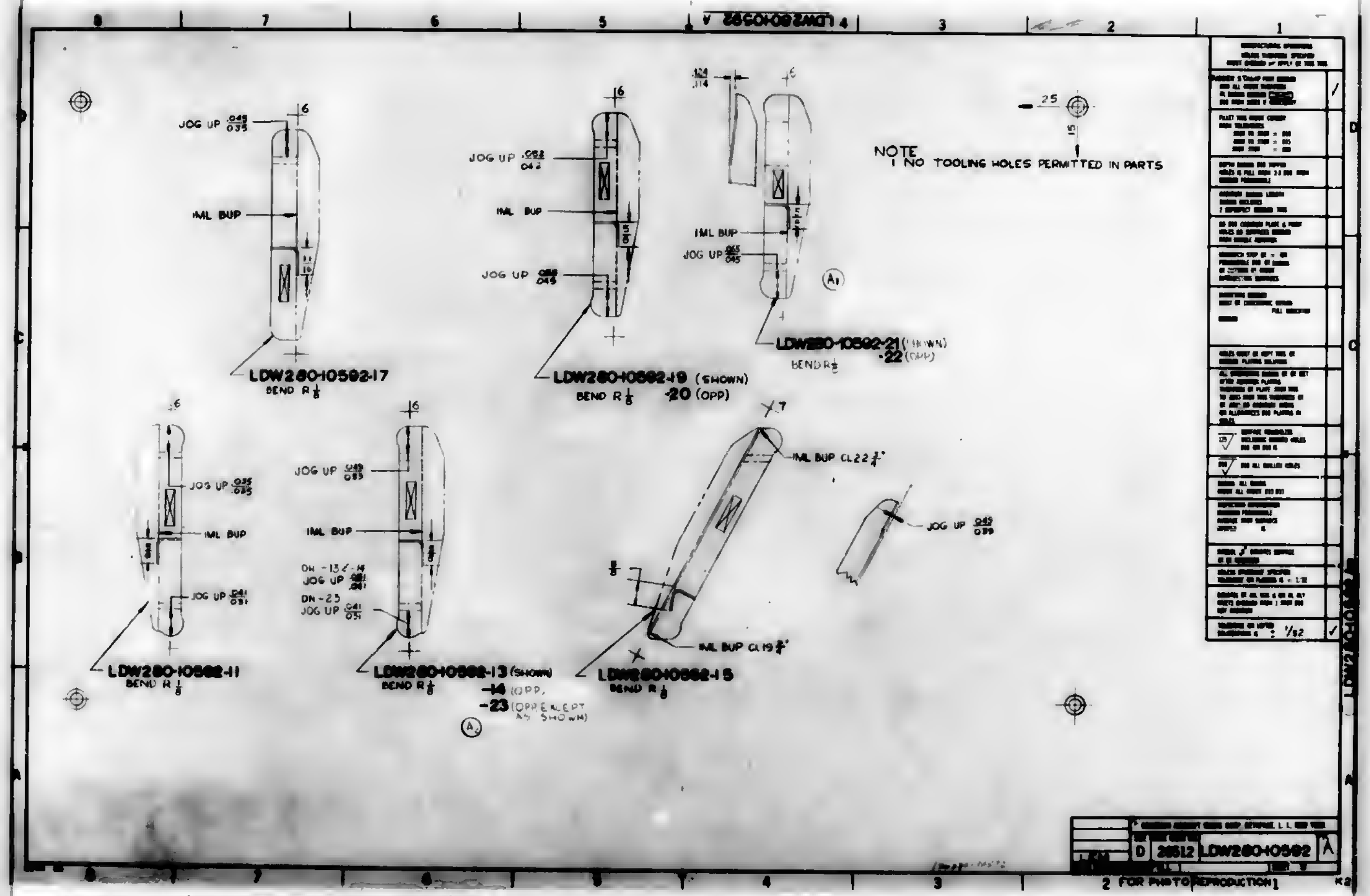

8
7
6
5
4
3
2
1
LDW280-10580 C
.165-.171(#19 DRILL) 2 HOLES
NAS697-A08(2)
MS20426AD3(4)
(ON-1)
B1
-31 TRIM
.165-.171(#19 DRILL)
ON-25
A2
11/16
.190-.196(#11 DRILL)
3 HOLES(ON-25)
-31 TRIM
C3
25
IML BUP
IML BDN CL 4"
22
B1
LDW280-10590-1(ASSY)
GHIIF-10, 1 D (ON-23 ONLY)
FLG DN (2) HOLES
A2
9/16
LDW280-10590-23
A2
A1
GHIIF-6, 3/4D (ON-13 ONLY)
FLG DN (2)
-25 (IDENTICAL TO -23 EXCEPT AS NOTED) ON-1
BEND R 1/8
-31 (IDENTICAL TO -23 EXCEPT AS NOTED)
C3
9/16
IML BDN OP 6"
IML BDN
22
B1 LDW280-10590-3(ASSY)
-29 TRIM
C3
.165-.171(#19 DRILL) 2 HOLES
NAS697-A08(2)
B1 MS20426AD3(4)
(ON-3)
11/16
LDW280-10590-13
-29 TRIM
C3
-17 (IDENTICAL TO -13 EXCEPT AS NOTED) ON-3
BEND R 1/8
-29 (IDENTICAL TO -13 EXCEPT AS NOTED)
C3
.061
.051
IML BUP
-35 TRIM
C5
.081
.071
24
A2
3/4
C8
.097-.102(#40 DRILL)
(43) HOLES
C2
LDW280-10590-21 SHOWN
A2
-22 OPP
BEND R 1/8
-35 (IDENTICAL TO -21 EXCEPT AS NOTED)
-36 OPP
C5

NOTES
1. NO TOOLING HOLES PERMITTED IN PARTS.
2. UPON INITIAL RELEASE OF THIS DWG TOOLING FOR
LDW280-10590-21 IS SIMILAR TO LDW280-10350-11
-22 -12
-13 & -17 -13
LDW280-10590-23 & -25 IS SIMILAR TO LDW280-10350-15

GRUMMAN AIRCRAFT ENG'G CORP. BETHPAGE, L. I. NEW YORK
LEM
D | 26512 | LDW280-10590 | C
FULL
3.00

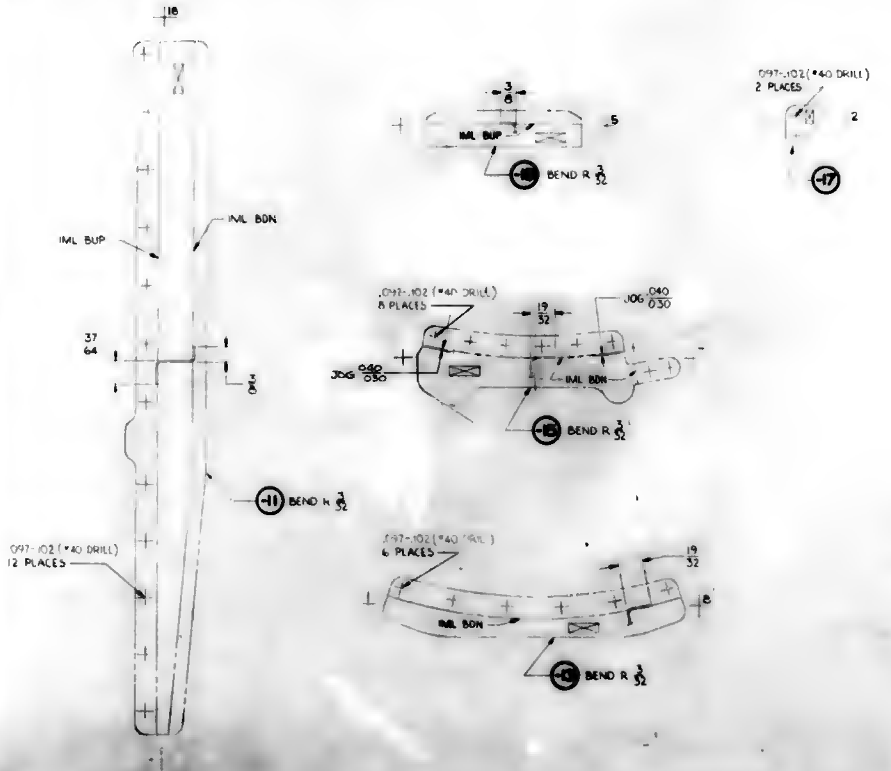
2 FOR PHOTO REPRODUCTION 1

01 NAS 9-1100


LDW280-10592 A
NOTE
1 NO TOOLING HOLES PERMITTED IN PARTS
JOG UP .045/.035
IML BUP
LDW280-10592-17
BEND R 1/8
JOG UP .052/.042
IML BUP
JOG UP .055/.045
LDW280-10592-19 (SHOWN)
-20 (OPP)
BEND R 1/8
.124/.114
IML BUP
JOG UP .055/.045
A1
LDW280-10592-21 (SHOWN)
-22 (OPP)
BEND R 1/8
.25
.15
JOS UP .035/.025
IML BUP
JOG UP .041/.031
LDW280-10592-11
BEND R 1/8
JOG UP .045/.035
IML BUP
DN -13 & -14
JOG UP .051/.041
DN -23
JOG UP .041/.031
LDW280-10592-13 (SHOWN)
-14 (OPP)
-23 (OPP EXCEPT AS SHOWN)
A2
IML BUP CL 22 3/4°
JOG UP .045/.035
IML BUP CL 19 3/4°
LDW280-10592-15
BEND R 1/8
D
26512
LDW280-10592
A
2 FOR PHOTO REPRODUCTION

01

NAS 9-1100


18
IML BUP
IML BDN
37
64
3
8
-11 BEND R 3/32
.097-.102 (#40 DRILL)
12 PLACES
3
8
.5
IML BUP
-13 BEND R 3/32
.097-.102 (#40 DRILL)
2 PLACES
2
-17
.097-.102 (#40 DRILL)
8 PLACES
19
32
JOG .040/.030
JOG .040/.030
IML BDN
-15 BEND R 3/32
.097-.102 (#40 DRILL)
6 PLACES
19
32
.8
IML BDN
-13 BEND R 3/32

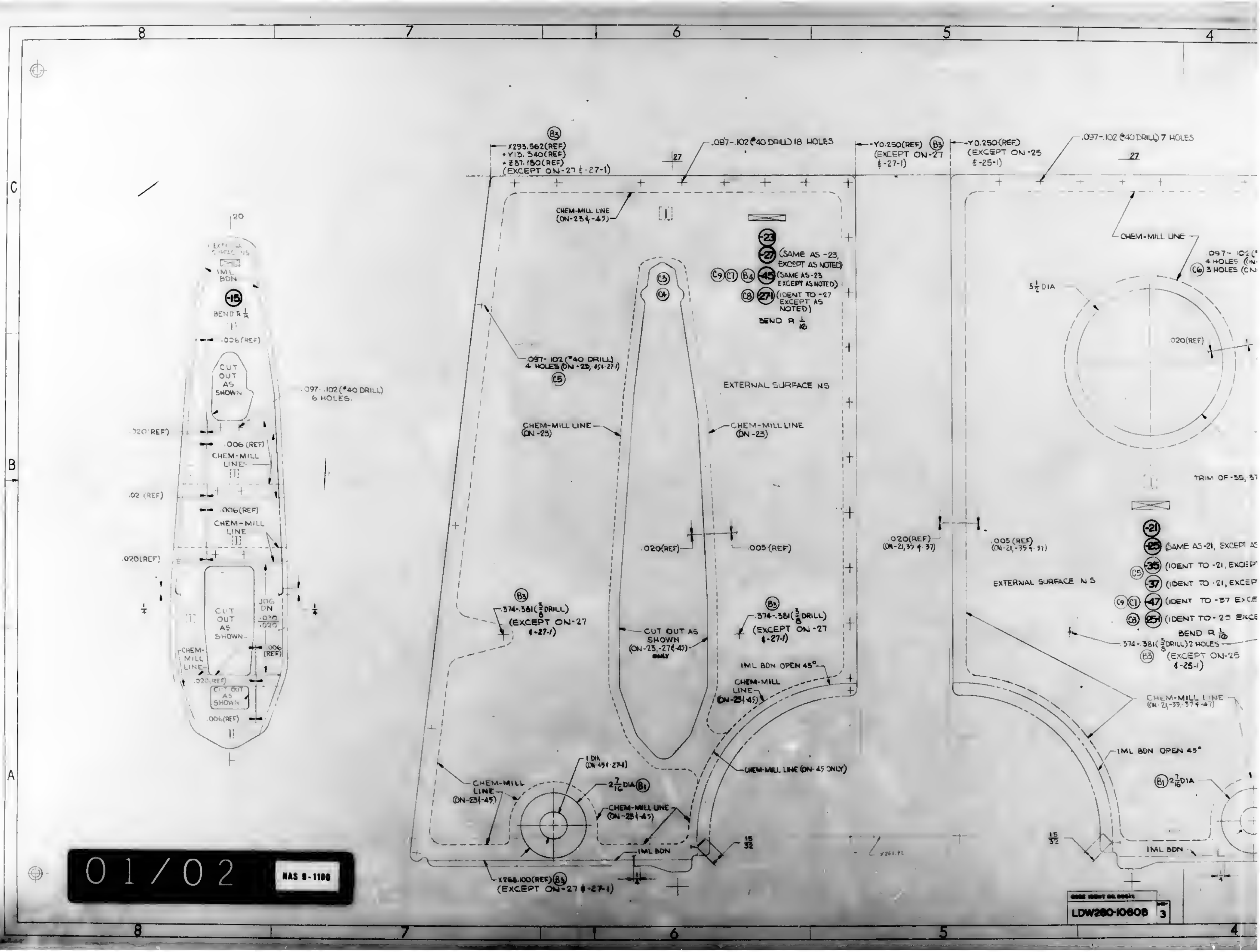
NOTES:
1 NO TOOLING HOLES PERMITTED IN THESE PARTS

D 26512 LDW280-10589 A

3.00

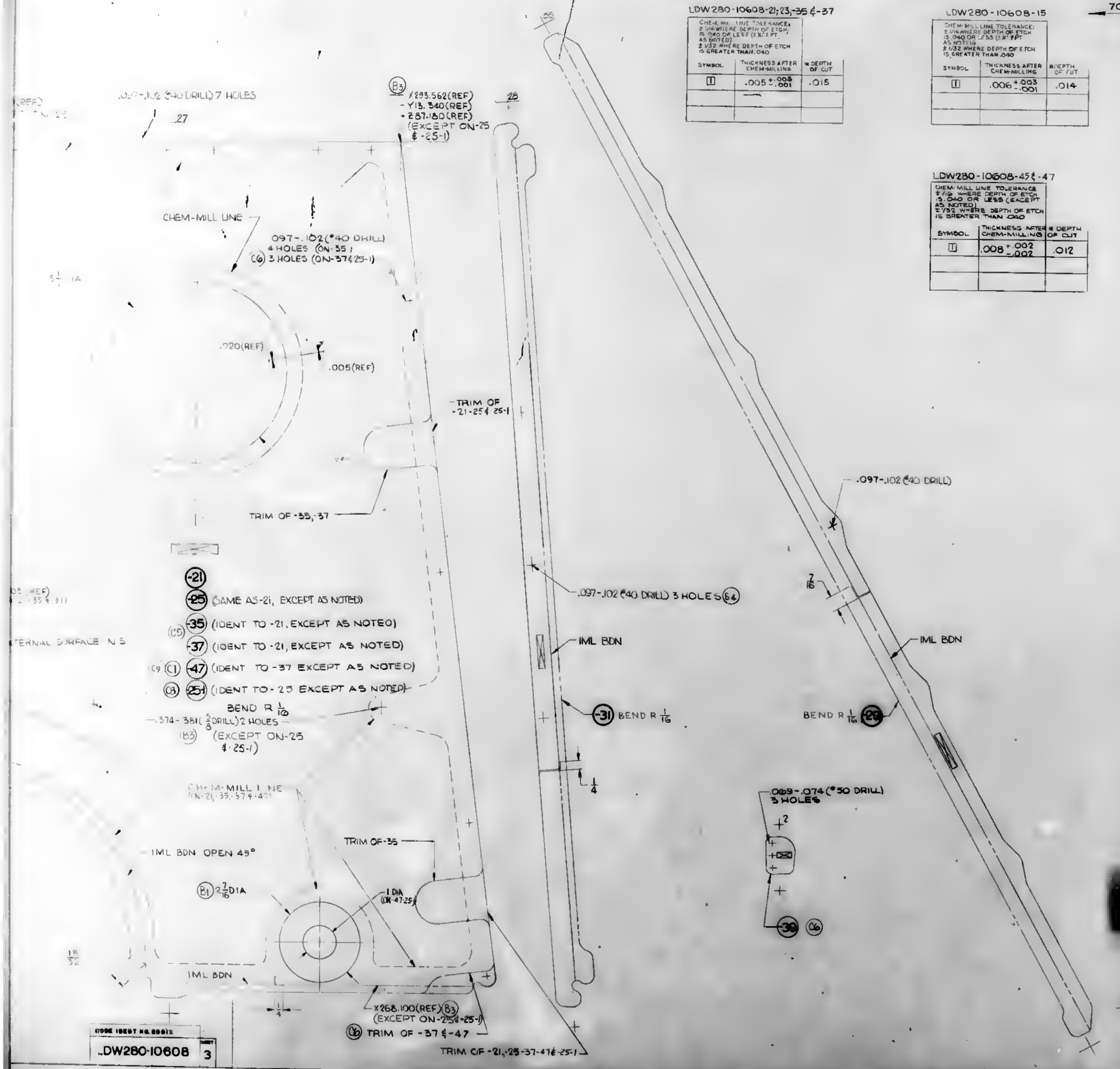
FOR PHOTO REPRODUCTION K2

NAS 9-1100


8
7
6
5
4
C
B
A
20
EXTERNAL SURFACE NS
IML BDN
-15
BEND R 1/4
.006(REF)
CUT OUT AS SHOWN
.097-.102(#40 DRILL) 6 HOLES.
.020(REF)
.006 (REF)
CHEM-MILL LINE
.02 (REF)
.006(REF)
CHEM-MILL LINE
.020(REF)
1/4
JOG DN
.030
.020
CUT OUT AS SHOWN
.006 (REF)
CHEM-MILL LINE
.020(REF)
CUT OUT AS SHOWN
.006(REF)
1/4
(B3)
X293.562(REF)
+Y13.340(REF)
+Z87.180(REF)
(EXCEPT ON-27 & -27-1)
27
.097-.102 (#40 DRILL) 18 HOLES
-Y0.250(REF) (B3)
(EXCEPT ON-27 & -27-1)
+Y0.250(REF)
(EXCEPT ON-25 & -25-1)
.097-.102 (#40 DRILL) 7 HOLES
27
CHEM-MILL LINE (ON-23 & -45)
-23
-27 (SAME AS -23, EXCEPT AS NOTED)
(C9) (C7) (B4) -45 (SAME AS -23 EXCEPT AS NOTED)
(C8) -27-1 (IDENT TO -27 EXCEPT AS NOTED)
BEND R 1/16
(C3)
(C4)
.097-.102 (#40 DRILL) 4 HOLES (ON-23, -45 & -27-1)
(C5)
EXTERNAL SURFACE NS
CHEM-MILL LINE (ON-23)
CHEM-MILL LINE (ON-23)
.020(REF)
.005 (REF)
(B3)
.374-.381(3/8 DRILL)
(EXCEPT ON-27 & -27-1)
CUT OUT AS SHOWN (ON-23, -27 & -45) ONLY
(B3)
.374-.381(3/8 DRILL)
(EXCEPT ON-27 & -27-1)
IML BDN OPEN 45°
CHEM-MILL LINE (ON-23 & -45)
CHEM-MILL LINE (ON-45 ONLY)
1 DIA (ON-45 & -27-1)
2 7/16 DIA (B1)
CHEM-MILL LINE (ON-23 & -45)
CHEM-MILL LINE (ON-23 & -45)
IML BDN
15/32
X268.100(REF) (B3)
(EXCEPT ON-27 & -27-1)
1/4
Y261.75
.020(REF) (ON-21, -35 & -37)
.005 (REF) (ON-21, -35 & -37)
CHEM-MILL LINE
5 1/2 DIA
.097-.102
4 HOLES
(C6) 3 HOLES
.020(REF)
TRIM OF -35, -37
-21
-25 (SAME AS -21, EXCEPT AS
(C5) -35 (IDENT TO -21, EXCEPT
-37 (IDENT TO -21, EXCEPT
(C9) (C7) -47 (IDENT TO -37 EXCE
(C8) -25-1 (IDENT TO -25 EXCE
BEND R 1/16
EXTERNAL SURFACE NS
.374-.381(3/8 DRILL) 2 HOLES
(B3) (EXCEPT ON-25 & -25-1)
CHEM-MILL LINE (ON-21, -35, -37 & -47)
IML BDN OPEN 45°
(B1) 2 7/16 DIA
15/32
IML BDN
1/4
LDW280-10608
3

01/02

NAS 9-1100


(REF)
.097-.102 (#40 DRILL) 7 HOLES
27
28
B3
X293.562(REF)
-Y13.340(REF)
+Z87.180(REF)
(EXCEPT ON-25 & -25-1)
55
CHEM-MILL LINE
.097-.102(#40 DRILL)
4 HOLES (ON-35)
C6 3 HOLES (ON-37 & 25-1)
5 1/8 DIA
.020(REF)
.005(REF)
TRIM OF -21-25 & 25-1
TRIM OF -35,-37
.097-.102 (#40 DRILL) 3 HOLES B4
IML BDN
-21
-25 (SAME AS -21, EXCEPT AS NOTED)
C5 -35 (IDENT TO -21, EXCEPT AS NOTED)
-37 (IDENT TO -21, EXCEPT AS NOTED)
C9 C1 -47 (IDENT TO -37 EXCEPT AS NOTED)
C8 -25-1 (IDENT TO -25 EXCEPT AS NOTED)
EXTERNAL SURFACE
BEND R 1/16
.374-.381 (3/8 DRILL) 2 HOLES
B3 (EXCEPT ON-25 & 25-1)
-31 BEND R 1/16
1/4
.097-.102 (#40 DRILL)
7/16
IML BDN
BEND R 1/16 -29
CHEM-MILL LINE (ON-21,-35,-37 & -47)
IML BDN OPEN 45°
TRIM OF -35
B1 2 7/16 DIA
1 DIA (ON-47 & 25-1)
15/32
IML BDN
1/4
X268.100(REF) B3
(EXCEPT ON-25 & 25-1)
C6 TRIM OF -37 & -47
TRIM OF -21,-25-37-47 & 25-1
.069-.074 (#50 DRILL) 3 HOLES
2
-39 C6
70
30

LDW280-10608-21,-23,-35 & -37

CHEM-MILL LINE TOLERANCE:
± 1/16 WHERE DEPTH OF ETCH IS .040 OR LESS (EXCEPT AS NOTED)
± 1/32 WHERE DEPTH OF ETCH IS GREATER THAN .040

SYMBOL	THICKNESS AFTER CHEM-MILLING	* DEPTH OF CUT
Ⅰ	.005 +.003 -.001	.015
	—	

LDW280-10608-15

CHEM-MILL LINE TOLERANCE:
± 1/16 WHERE DEPTH OF ETCH IS .040 OR LESS (EXCEPT AS NOTED)
± 1/32 WHERE DEPTH OF ETCH IS GREATER THAN .040

SYMBOL	THICKNESS AFTER CHEM-MILLING	* DEPTH OF CUT
Ⅰ	.006 +.003 -.001	.014

LDW280-10608-45 & -47

CHEM-MILL LINE TOLERANCE
± 1/16 WHERE DEPTH OF ETCH IS .040 OR LESS (EXCEPT AS NOTED)
± 1/32 WHERE DEPTH OF ETCH IS GREATER THAN .040

SYMBOL	THICKNESS AFTER CHEM-MILLING	* DEPTH OF CUT
Ⅰ	.008 +.002 -.002	.012

NOTES:

1. NO TOOLING HOLES PERMITTED IN PARTS
2. MAKE LDW280-10608-15,-21,-23 & 45 FROM 2024-T3 ALCLAD BOTH SIDES (SKIN QUALITY). FINISH ALMALITE 200/R1/EB/O WHICH MAY BE PURCHASED FROM ALUMINUM CO OF AMERICA (CODE IDENT 01634)
3. THE SURFACE DESIGNATED "EXTERIOR" SHALL BE PROTECTED WITH STRIPPABLE VINYL COATING #796 PURCHASED FROM CARROLL PRODUCTS, INC. FARMINGDALE, N.Y.
4. THE INTERIOR SURFACES OF -21,-45, -23 & -15 TO BE CHEM-MILLED IN ACCORDANCE WITH LSP-14 26100 FINISH ENTIRE SURFACE #76 (LSP 14-9010)
5. MATERIAL, FINISHES, HANDLING & PERMISSIBLE DEVIATIONS OF LM ASCENT STAGE THERMAL SHIELD SKINS PER LPC250-16.

MANUFACTURING OPERATIONS
UNLESS OTHERWISE SPECIFIED
NOTES CHECKED ✓ APPLY TO THIS DWG.

PART NUMBER AND ALL OTHER MARKINGS IN REGION MARKED ▭	✓
FILLET AND ANODE CORNER RADII TOLERANCES .0000 TO .0620 ± .010 .0620 TO .2500 ± .015 OVER .2500 ± .030	
DEPTH SHOWN FOR TAPPED HOLES IS FULL THDS. 2-3 IMP THDS. BEYOND PERMISSIBLE.	
EXTERNAL THREAD LENGTH SHOWN INCLUDES 2 IMPERFECT THREADS MAX.	
DO NOT CADMIUM PLATE & PAINT HOLES OR SURFACES MARKED WITH DOUBLE ASTERISK.	
MISMATCH STEP OF ± .030 PERMISSIBLE DUE TO CHANGE OF CUTTERS AT INSIDE INTERSECTING SURFACES.	
DIAMETERS MARKED MUST BE CONCENTRIC WITHIN FULL INDICATOR READING	
HOLES MUST BE KEPT FREE OF CHROME PLATING SOLUTION.	
ALL DIMENSIONS SHOWN TO BE MET AFTER CADMIUM PLATING. THICKNESS OF PLATE .0003 MIN. TO .0005 MAX. MIN. THICKNESS TO BE .0002 ON THREADED AREAS. NO ALLOWANCE FOR PLATING IN HOLES	
125 √ SURFACE ROUGHNESS INCLUDING REAMED HOLES PER MIL-STD-10	
250 √ FOR ALL DRILLED HOLES	
REMOVE ALL BURRS. BREAK ALL EDGES .015-.031	
INSPECTION INFORMATION MAXIMUM PERMISSIBLE AVERAGE EDGE DISTANCE MARKED IS	
SYMBOL ƒ DENOTES SURFACE TO BE MACHINED	
UNLESS OTHERWISE SPECIFIED TOLERANCE ON FLANGES IS ± 1/32	
LENGTHS OF AN, NAS & MS AL ALY RIVETS SHORTER THAN 1 INCH ARE NOT SPECIFIED.	
TOLERANCE ON LOFTED DELINEATIONS IS	✓

DWG SIZE 34 X 52
PRINTING INFO ONLY
FULL SIZE SHEET AREA (34 X 93) — 23.5 SQ. FT.
1/2 SIZE SHEET AREA (1/4 OF FULL) — 6 SQ. FT.
PRINT TRIM LINE

LDW280-10608 C

LDW280-10608 C

02/02 NAS 9-1100

CODE IDENT NO. 26512
LDW280-10608 SHEET 3

GRUMMAN AIRCRAFT ENGRG CORP., BETHPAGE, L.I., NEW YORK

SIZE	CODE IDENT NO.		REV
J	26512	LDW280-10608	C

LEM
MADE OF OR USED ON
SCALE FULL
SHEET 3 OF 3
2/2
FOR PHOTO REPRODUCTION
K2

REVISIONS

CHANGE LTR	ITEM NO	SHEET NO	ZONE	GRUMMAN INFO ONLY	INT SPEC	CLASS I	CLASS II	ENGRG ORDER	DESCRIPTION	EFFECTIVITY	DISPOSITION OF EXISTING PARTS		TRANSMITTED BY AND DATE	ENGRG APPD	[illegible] APPD
											REWORK	SCRAP			
—		1.00 2 3							REMOVED -11 & -12, ADDED -21 -22 -23 & -24. ADDED SH 1.10, SH 1 OF 4 WAS SH 1 OF 3.	NOTED		-11 -12			
B	1	3.00 2.00 1.00						EO. B1	ADDED -25, -26 -27, & -28. FOR -15, -16, -17, -19, -21, -22, -25, -26 ADDED LM-3 THRU LM-15 REQUIREMENTS.	LM-3(33) THRU LM-15(45)	NOT	REQ'D	M. SANYATY 4/15/68		
	2	1.00					✓	LED 280-611	ON INCORP. OF E.O. B1 -17, -19 (2EA REQ'D) WAS (1 EA REQ'D)	LM-3(33) THRU LM-15(45)	NOT	REQ'D			
	3	1.00 1.01		LFM 126		✓		LDD 1001-33	IN M/B FOR -15 THRU -22 ADDED END ITEM LFM 126 SHEET 1.00 OF 5 WAS 1.00 OF 4 ADDED SHEET 1.01	LTA-8(8)	NOT	REQ'D			
	4	1.00					✓		IN M/B -13, -14 -27, -28 (2) REQD PER N/A WAS (3) REQD (REF EO 53 & BE OF LDW280-28176 & EO A3 OF LDW280 54176)	LTA8(8) LM-3(33)-THRU LM-15(45)		✓			

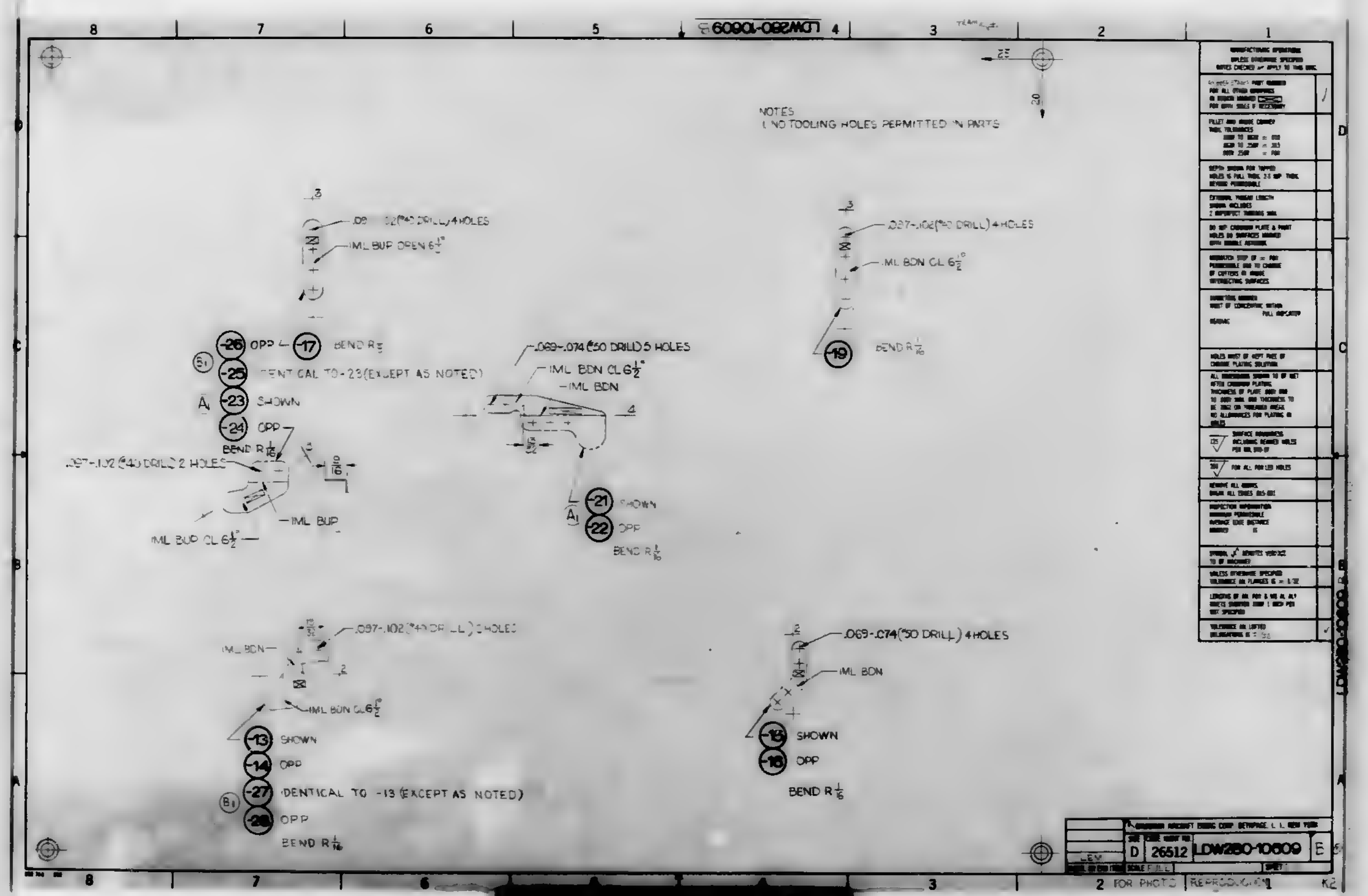
FOR CONTINUATION OF REVISIONS SEE SHEET ______

GRUMMAN AIRCRAFT ENGRG CORP, BETHPAGE, L. I., NEW YORK

SIZE	CODE IDENT NO		
B	26512	LDW280-10609	B
SCALE NONE			SHEET 1.10

01

NAS 9-1100


LDW280-10609
8
7
6
5
4
3
2
1
D
C
B
A
.25
.20
.3
.097-.102(#40 DRILL) 4 HOLES
IML BUP OPEN 6½°
-26 OPP
-17
BEND R 1/8
B1
-25 IDENTICAL TO -23 (EXCEPT AS NOTED)
A1
-23 SHOWN
-24 OPP
BEND R 1/16
.097-.102 (#40 DRILL) 2 HOLES
IML BUP
IML BUP CL 6½°
.069-.074 (#50 DRILL) 5 HOLES
IML BDN CL 6½°
IML BDN
4
-21 SHOWN
-22 OPP
BEND R 1/16
.097-.102 (#40 DRILL) 4 HOLES
IML BDN CL 6½°
-19
BEND R 1/16
.097-.102 (#40 DRILL) 3 HOLES
IML BDN
IML BDN CL 6½°
-13 SHOWN
-14 OPP
-27 IDENTICAL TO -13 (EXCEPT AS NOTED)
-28 OPP
BEND R 1/16
.069-.074 (#50 DRILL) 4 HOLES
IML BDN
-15 SHOWN
-16 OPP
BEND R 1/16

NOTES
1. NO TOOLING HOLES PERMITTED IN PARTS

LEM

D 26512 LDW280-10609 B

SCALE FULL

SHEET 1

FOR PHOTO REPRODUCTION

K2

01

NAS 9-1100

C

LDW280-10610

MODEL OR END ITEM	NEXT ASSY	MODULE OR SER NO	REQD PER MODULE OR END ITEM
LEM	LDW280-28176	LTA-5(8)	1 EA
LDW280-10610-23 & -29			
LEM	LDW280-28176	LEM-2(32)	5
LEM	LDW280-28176	LEM-1(31)	5
LEM	LDW280-28176	LTA-8(8)	5
LDW280-10610-19			
LEM	LDW280-54176	LEM-15(45)	1 EA
		LEM-14(44)	1 EA
		LEM-13(43)	1 EA
		LEM-12(42)	1 EA
		LEM-11(41)	1 EA
		LEM-10(40)	1 EA
		LEM-9(39)	1 EA
		LEM-8(38)	1 EA
		LEM-7(37)	1 EA
		LEM-6(36)	1 EA
		LEM-5(35)	1 EA
	LDW280-54176	LEM-4(34)	1 EA
	LDW280-28176	LEM-3(33)	1 EA
	LDW280-28176	LEM-2(32)	1 EA
	LDW280-28176	LEM-1(31)	1 EA
LEM	LDW280-28176	[illegible]	1 EA

PART NO LDW280-10610-25 -27 | SHEET SCH NO

MODEL OR END ITEM	NEXT ASSY	MODULE OR SER NO	REQD PER MODULE OR END ITEM
LEM 126	LDW280-28176	LTA-8(8)	1 EA
LDW280-10610-23 & -29-1			
LM	LDW280-28176	LM-3(33)	1 EA
LDW280-10610-35 & -39			
LM	LDW280-28176	LM-2(32)	1
LM	LDW280-28176	LM-1(31)	1
LDW280-10610-21			
LM	LDW280-28176	LEM-3(33)	1
LM	LDW280-28176	LEM-2(32)	1
LM	LDW280-28176	LEM-1(31)	1

PART NO LDW280-10610-13 | SHEET SCH NO

MODEL OR END ITEM	NEXT ASSY	MODULE OR SER NO	REQD PER MODULE OR END ITEM
LM	LDW280-54176	LEM-15(45)	1 EA
		LEM-14(44)	1 EA
		LEM-13(43)	1 EA
		LEM-12(42)	1 EA
		LEM-11(41)	1 EA
		LEM-10(40)	1 EA
		LEM-9(39)	1 EA
		LEM-8(38)	1 EA
		LEM-7(37)	1 EA
LM		LEM-6(36)	1 EA
LEM 140		LEM-5(35)	1 EA
LEM 140	LDW280-54176	LEM-4(34)	1 EA
LDW280-10610-43-47 & -49			
LEM	LDW280-54176	LEM-15(45)	5
		LEM-14(44)	8
		LEM-13(43)	5
		LEM-12(42)	8
		LEM-11(41)	8
		LEM-10(40)	8
		LEM-9(39)	5
		LEM-8(38)	5
		LEM-7(37)	8
		LEM-6(36)	8
		LEM-5(35)	8
	LDW280-54176	LEM-4(34)	8
LEM	LDW280-28176	LEM-3(33)	8

PART NO LDW280-10610-31 | SHEET SCH NO 30-

(E1)

SH REV STATUS FOR DESCRIPTION OF REV SEE SUBS SH				
SHEET	1.00	1.10	2.00	3.00
REV	C	C	C	C
SHEET				
REV				
SHEET				
REV				

LAST SECT LTR USED ~

LAST DASH NO USED -49

GRUMMAN REL INFO C

PRINT NO.

275

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES

TOLERANCE UNLESS SPECIFIED FRACTIONS - DECIMALS - ANGLES ±1/32 ±.020 ±1/2

ORIG DWG AUTH

DETAIL SPEC REQUIREMENT

CLASS II ENGRG CHANGE

CLASS I ENGRG CHANGE

CONTRACT NO NAS 9-1100

LINE ITEM

DOCUMENTATION TYPE II

DRAWN BY ESCHELL

LAYOUT BY M. SALVADORE

CHECKED BY D. FASS 5-6-65

RELIABILITY

PROJ ENGR

REL GROUP

GRUMMAN AIRCRAFT ENGRG CORP
BETHPAGE L. I. NEW YORK

SHIELD
ASCENT STAGE-CABIN-THERMAL SHIELD

SIZE B | CODE IDENT NO 26512 | LDW280-10610 | C

SCALE NONE | SHEET 1.00 OF 4

REV C CDR 5-24-65

01

NAS 9-1100

REVISIONS

CHANGE LTR	ITEM NO.	SHEET NO.	ZONE	GRUMMAN INFO ONLY	DET SPEC	CLASS I	CLASS II	ENGRG ORDER	DESCRIPTION	EFFECTIVITY	DISPOSITION OF EXISTING PARTS		CHANGED BY AND DATE	ENGRG APPD	[illegible] APPD
											REWORK	SCRAP			
A	1	1, 1.10, 2, 3							ADDED SH 1.10, SHEET 1 OF 4 WAS 1 OF 3. REMOVED -11, -15, -17 & ADDED -21, -23, -25, -27, -29. IN MOD BLK FOR -19, 8 REQD WAS 7 REQD.	NOTED		-11, -15, -17	LUNDSTEN 8-1-66		
B	1	1.10 & 3.00	2B & 4B					EO-B1	REVISED TRIM OF -21 & -29 (2 PLACES)	LTA-8 LEM-1 & LEM-2	✓		V.NARONIS 3-6-67		
	2	1, 1.10, 2 & 3	5A					EO-B2	ADDED -31. ADDED LM-3 THRU LM-15 EFF FOR -25 & -27.	LM-3 THRU LM-15	NOT	REQD			
	3	1.00 & 1.10						EO-B3	FOR -13 & -21 ADDED EFFECTIVITY LM-3	LM-3	NOT	REQD			
	4	1.10, 2 & 3	4A						ADDED -33 & EFF LM-4 THRU LM-15 FOR -13 & -33. ADDED .069-.074 (#50 DRILL) 2 HOLES FOR -25, -27 & ADDED COORDINATES FOR -13, -21, -23, -25, -27, -29 & -33.	LM-4 THRU LM-15	✓				
C	1	1.00 1.10 3.00	1B		✓			LEO280-577	ADDED NOTE 5	LTA-5 LM-1 THRU LM-5	NOT	REQD	W.CONROY 4-17-68		
	2	1.00 2.00 3.00	4A			✓		EOC2 LCD1249 CCA455	IN M/B FOR -21 REMOVED LM-3 EFF FROM N/A LDW280-28176 ADDED -35 N/A LDW280-28176 EFF LM-3 REVISED TRIM -33 & CORRECTED REF COORDINATE -Y17.160 WAS -Y17.360	LM-3 THRU LM-15	✓				
	3	1.00 2.00 3.00	[illegible]	R		✓		EOC3 LCD1249 CCA455	REVISED TRIM OF -35 ADDED -37 & -39 REMOVED -33		✓	-33			
	4	1.00 2.00 3.00	5A				✓	EO C4	CREATED -41 SAME AS -37 EXCEPT AS SHOWN EFF LM-4 THRU LM-15 REMOVED EFF LM-4 THRU LM-15 FROM -37	LM-4 THRU LM-15		✓			
	5	1.00 2.00 3.00	[illegible]	O LFM140		✓		EOC5 LCD2360	ADDED -47 -43 AND -45 DELETED -41 RESTRICTED -13 EFF TO LM-1 THRU LM-3 (WAS LM-1 THRU LM-15)		✓	✓			
	6	1.00 2.00 3.00	[illegible]	LFM140		✓		EOC6 LCD2360	REF EOC5 S/B ADDED -43 SAME AS -21 (WAS ADDED -43 SAME AS -41) IN FIELD OF EOC5 -41 DOUBLER S/B -47. ADDED DIMENSIONS 1 13/32 2 1/32 2 25/32 2 5/32 V4 R (TYP) 3 1/32 R & 2 1/32 R		NOT	REQD			
	7	1.00 2.00 3.00	3B	LFM140		✓		ck LCD2360	ADDED -49 WAS -45, DELETED -45			-45			
	8	1.00 2.00 3.00		LFM126		✓		LCD1021-330	ADDED -23-1 & -29-1 -	LTA-8	✓				

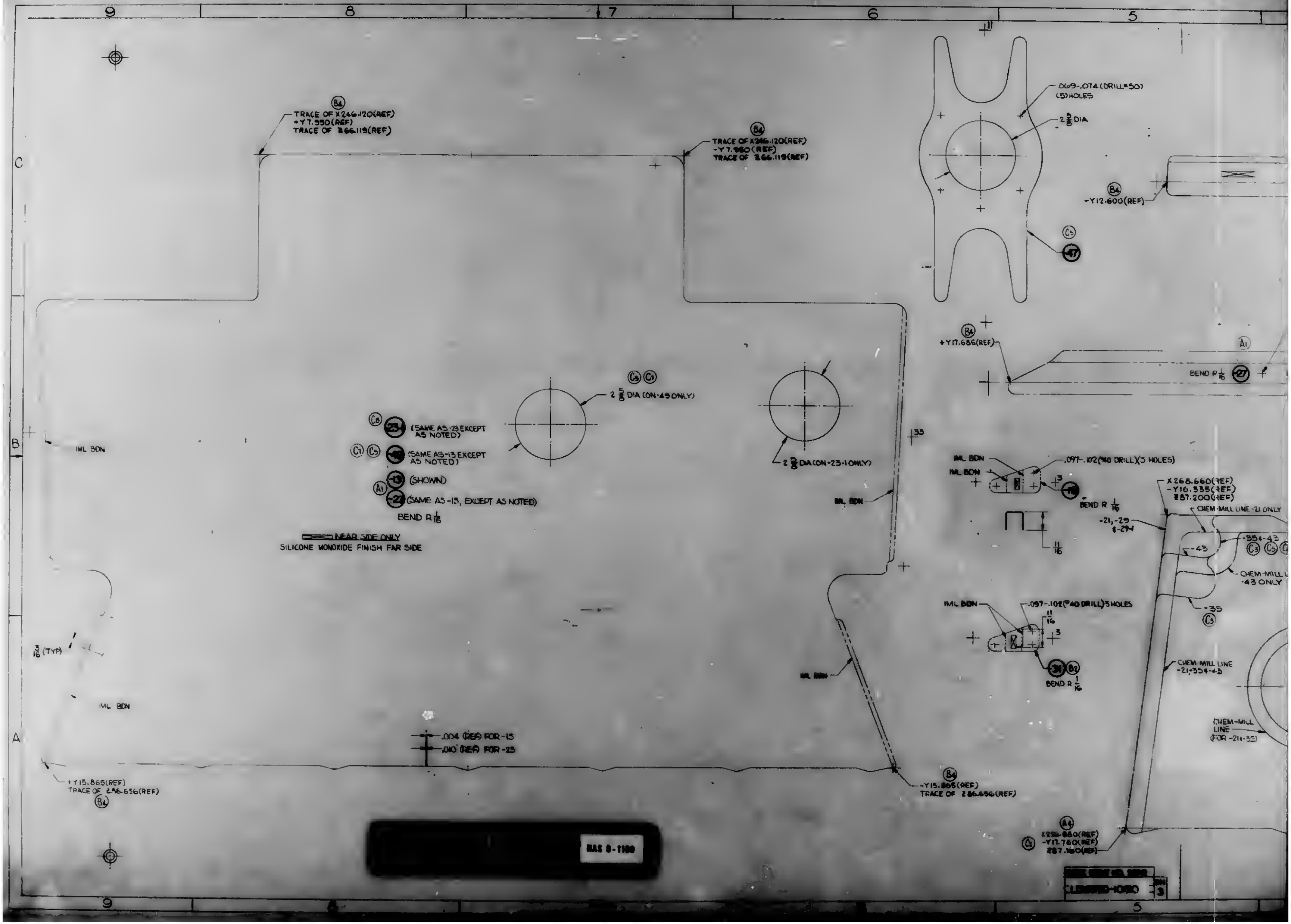
FOR CONTINUATION OF REVISIONS SEE SHEET ______

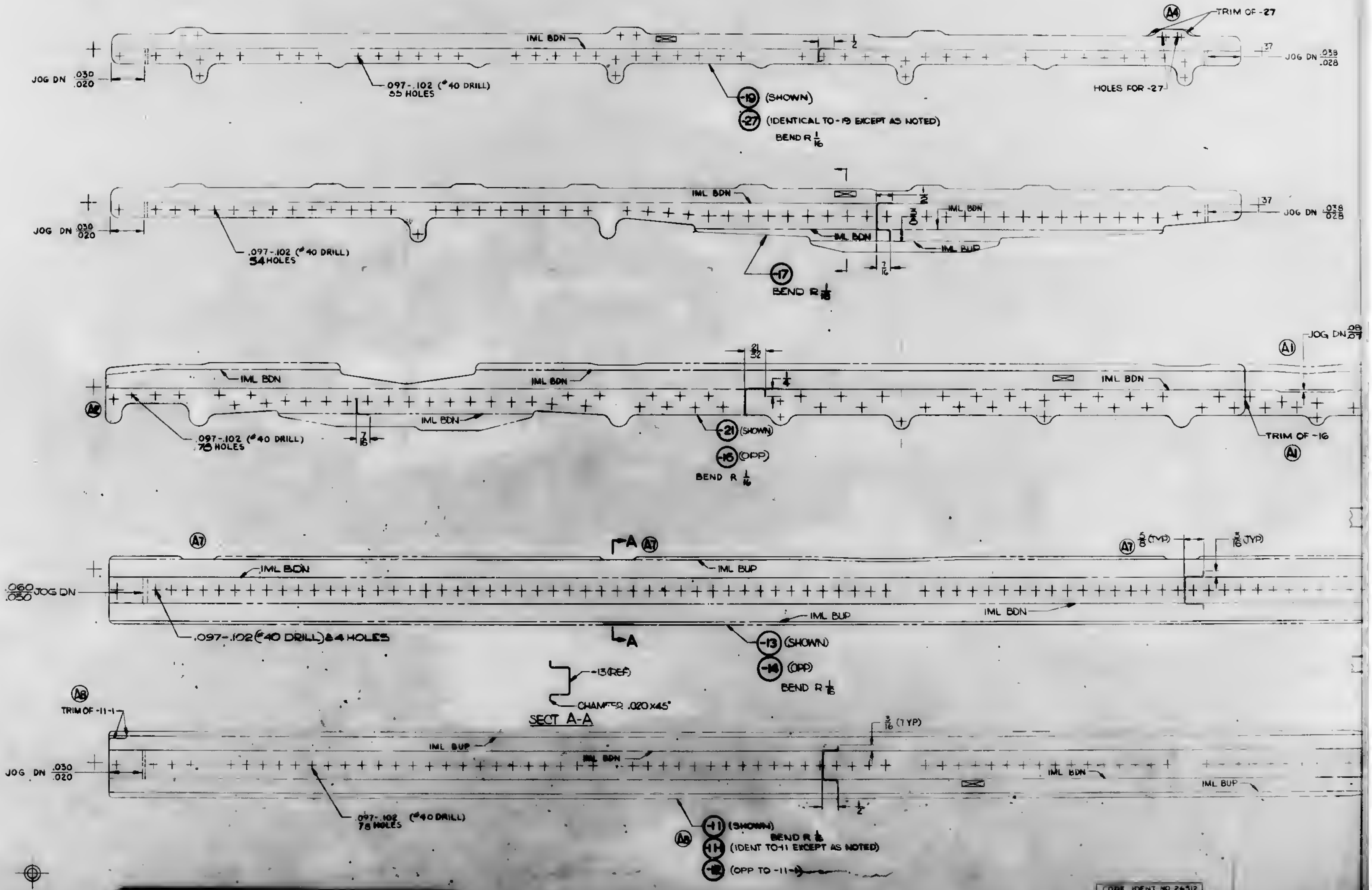
[illegible] 7/3 5-66

GRUMMAN AIRCRAFT ENGRG CORP, BETHPAGE, L. I., NEW YORK			
SIZE B	CODE IDENT NO. 26512	LDW280-10610	C
SCALE NONE			SHEET 1.10

01

NAS 9-1100


9
8
7
6
5
C
B
A
B4
TRACE OF X246.120(REF)
+Y7.950(REF)
TRACE OF Z66.119(REF)
B4
TRACE OF X246.120(REF)
-Y7.960(REF)
TRACE OF Z66.119(REF)
11
.069-.074 (DRILL #50)
(5) HOLES
2 5/8 DIA
B4
-Y12.600(REF)
C5
-47
B4
+Y17.686(REF)
A1
BEND R 1/16
-27
C5 C7
2 5/8 DIA (ON -49 ONLY)
C8
-23 (SAME AS -23 EXCEPT AS NOTED)
C7 C5
-49 (SAME AS -13 EXCEPT AS NOTED)
-13 (SHOWN)
A1
-27 (SAME AS -13, EXCEPT AS NOTED)
BEND R 1/16
NEAR SIDE ONLY
SILICONE MONOXIDE FINISH FAR SIDE
2 5/8 DIA (ON -23-1 ONLY)
35
IML BDN
IML BDN
IML BDN
.097-.102 (#40 DRILL) (3 HOLES)
3
-19
BEND R 1/16
11/16
X268.660(REF)
-Y16.335(REF)
Z87.200(REF)
CHEM-MILL LINE -21 ONLY
-21, -29
& -29-1
-35 & -43
C3 C5
-43
CHEM-MILL LINE
-43 ONLY
-35
C3
IML BDN
IML BDN
.097-.102 (#40 DRILL) 5 HOLES
11/16
3
-31 B2
BEND R 1/16
CHEM MILL LINE
-21, -35 & -43
CHEM-MILL LINE (FOR -21 & -35)
IML BDN
3/16 (TYP)
IML BDN
IML BDN
.004 (REF) FOR -13
.010 (REF) FOR -23
+Y15.865(REF)
TRACE OF Z86.656(REF)
B4
B4
-Y15.865(REF)
TRACE OF Z86.656(REF)
A4
C1
X256.880(REF)
-Y17.760(REF)
Z87.160(REF)
NAS 9-1100
3

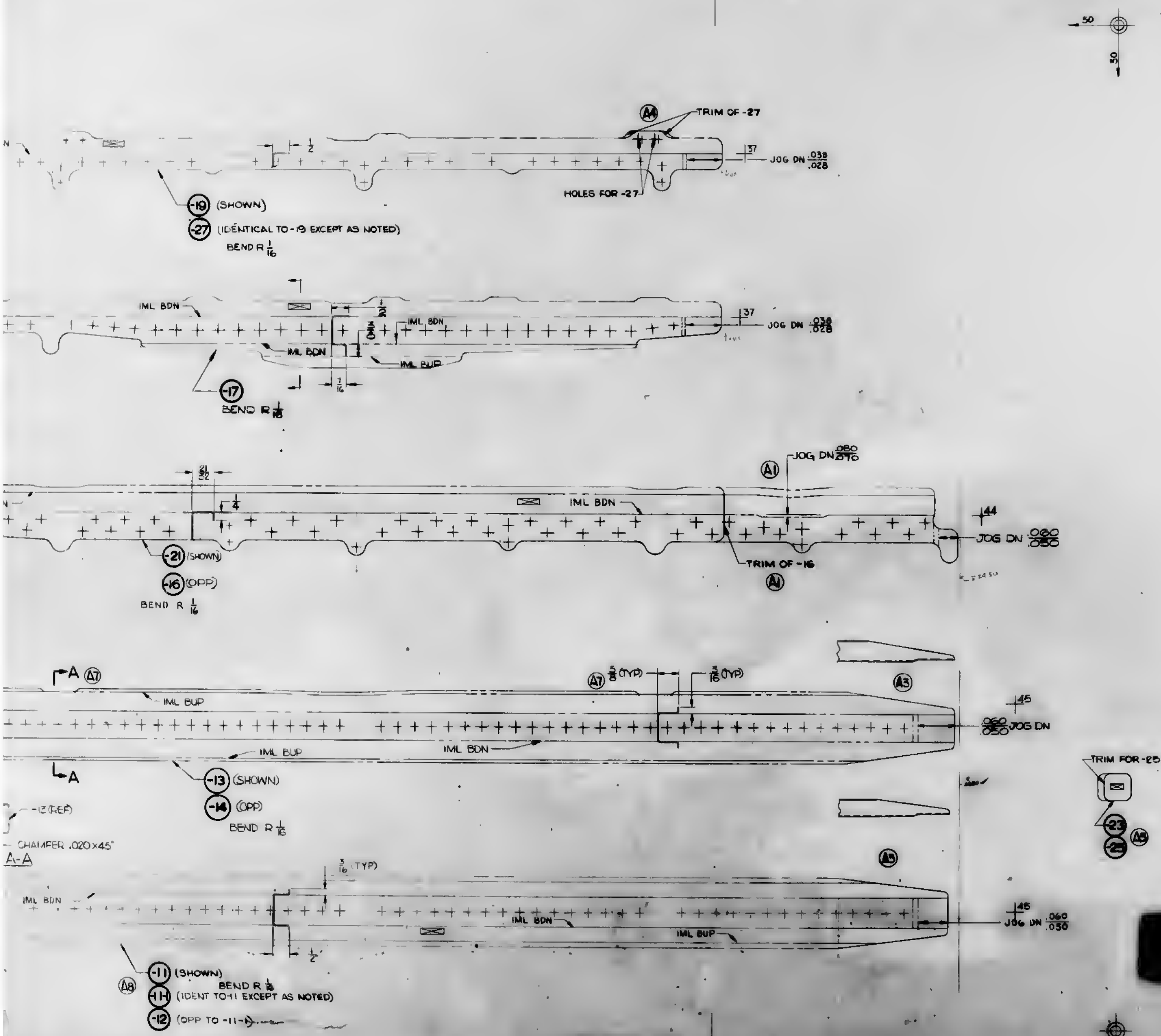

7
6
5
4
3
(A4)
TRIM OF -27
IML BDN
1/2
.37
JOG DN .038/.028
JOG DN .030/.020
.097-.102 (#40 DRILL) 55 HOLES
HOLES FOR -27
-19 (SHOWN)
-27 (IDENTICAL TO -19 EXCEPT AS NOTED)
BEND R 1/16
IML BDN
IML BDN
IML BDN
IML BUP
.37
JOG DN .038/.028
JOG DN .030/.020
.097-.102 (#40 DRILL) 54 HOLES
7/16
-17
BEND R 1/16
21/32
JOG DN .08/.07
(A1)
IML BDN
IML BDN
IML BDN
IML BDN
(A2)
.097-.102 (#40 DRILL) 78 HOLES
7/16
-21 (SHOWN)
-16 (OPP)
BEND R 1/16
TRIM OF -16
(A1)
(A7)
A
(A7)
(A7) 5/8 (TYP)
3/16 (TYP)
IML BDN
IML BUP
.060/.050 JOG DN
IML BUP
IML BDN
.097-.102 (#40 DRILL) 84 HOLES
A
-13 (SHOWN)
-14 (OPP)
BEND R 1/16
-13 (REF)
CHAMFER .020 X 45°
SECT A-A
(A8)
TRIM OF -11-1
3/16 (TYP)
IML BUP
IML BDN
IML BDN
IML BUP
JOG DN .030/.020
1/2
.097-.102 (#40 DRILL) 78 HOLES
(A8)
-11 (SHOWN)
BEND R 1/16
-11-1 (IDENT TO -11 EXCEPT AS NOTED)
-12 (OPP TO -11-1)
C
B
A

CODE IDENT NO 26512

LDW280-10524 | 3

NAS 9-1100

0 1 / 0


A4
TRIM OF -27
1/2
37
JOG DN .038/.028
HOLES FOR -27
-19 (SHOWN)
-27 (IDENTICAL TO -19 EXCEPT AS NOTED)
BEND R 1/16
IML BDN
1/2
IML BDN
IML BDN
IML BUP
7/16
37
JOG DN .038/.028
-17
BEND R 1/16
A1
JOG DN .080/.070
21/32
1/4
IML BDN
44
JOG DN .060/.050
TRIM OF -16
A1
-21 (SHOWN)
-16 (OPP)
BEND R 1/16
A A7
A7 5/8 (TYP)
3/16 (TYP)
A3
IML BUP
45
.060/.050 JOG DN
IML BDN
IML BUP
A
-13 (SHOWN)
-14 (OPP)
BEND R 1/16
-12 (REF)
CHAMFER .020X45°
A-A
TRIM FOR -25
-23
-25
A5
A5
3/16 (TYP)
IML BDN
45
JOG DN .060/.050
IML BDN
IML BUP
1/2
-11 (SHOWN)
BEND R 1/8
A8
-11-1 (IDENT TO -11 EXCEPT AS NOTED)
-12 (OPP TO -11-1)
50
30

NOTE:

1. NO TOOLING HOLES PERMITTED IN PARTS

MANUFACTURING OPERATIONS UNLESS OTHERWISE SPECIFIED NOTES CHECKED ✓ APPLY TO THIS DWG.	
RUBBER STAMP PART NUMBER AND ALL OTHER MARKINGS IN REGION SHOWN ▭ USE BOTH SIDES IF NECESSARY.	✓
FILLET AND INSIDE CORNER RADII TOLERANCES [illegible] TO [illegible] ± .010 [illegible] TO [illegible] ± .015 OVER [illegible] ± [illegible]	
DEPTH SHOWN FOR TAPPED HOLES IS FULL THDS. 2-3 IMP THDS. BEYOND PERMISSIBLE.	
EXTERNAL THREAD LENGTH SHOWN INCLUDES 2 IMPERFECT THREADS MAX.	
DO NOT CADMIUM PLATE & PAINT HOLES OR SURFACES MARKED TOTO DOUBLE ASTERISK.	
MISMATCH STEP OF ± [illegible] PERMISSIBLE DUE TO CHANGE OF CUTTERS AT INSIDE INTERSECTING SURFACES.	
DIAMETERS MARKED MUST BE CONCENTRIC WITHIN FULL INDICATOR READING	
HOLES MUST BE KEPT FREE OF CHROMIC PLATING SOLUTION.	
ALL DIMENSIONS SHOWN TO BE MET AFTER CHROMIUM PLATING. THICKNESS OF PLATE [illegible] MIN. TO [illegible] MAX. MIN. THICKNESS TO BE [illegible] ON THREADED AREAS. NO ALLOWANCE FOR PLATING IN HOLES.	
$\sqrt{}$ SURFACE ROUGHNESS INCLUDING REAMED HOLES PER MIL-STD-10	
$\sqrt{}$ FOR ALL DRILLED HOLES	
REMOVE ALL BURRS. BREAK ALL EDGES [illegible]	
INSPECTION INFORMATION MINIMUM PERMISSIBLE AVERAGE EDGE DISTANCE MARKED ⊕	
SYMBOL ∮ DENOTES SURFACE TO BE MACHINED	
UNLESS OTHERWISE SPECIFIED TOLERANCE ON FLANGES IS ± 1/32	
LENGTHS OF [illegible] SHEETS SHORTER THAN 1 INCH [illegible] NOT SPECIFIED.	
TOLERANCE ON LOFTED DELINEATIONS IS ± 1/32	✓

20.5 SQ. FT.
5.1 SQ. FT.
SIZE [illegible] 70
PRINTING INFO ONLY
FULL SIZE SHEET AREA (IN SQ. FT.)
1/4 SIZE SHEET AREA (1/4 OF FULL)
PRINT TRIM LINE

RECORD BLOCK		
MODULE	LOMO	EFFECTIVITY
LM	AG	LTA-8

02/02

NAS 9-1100

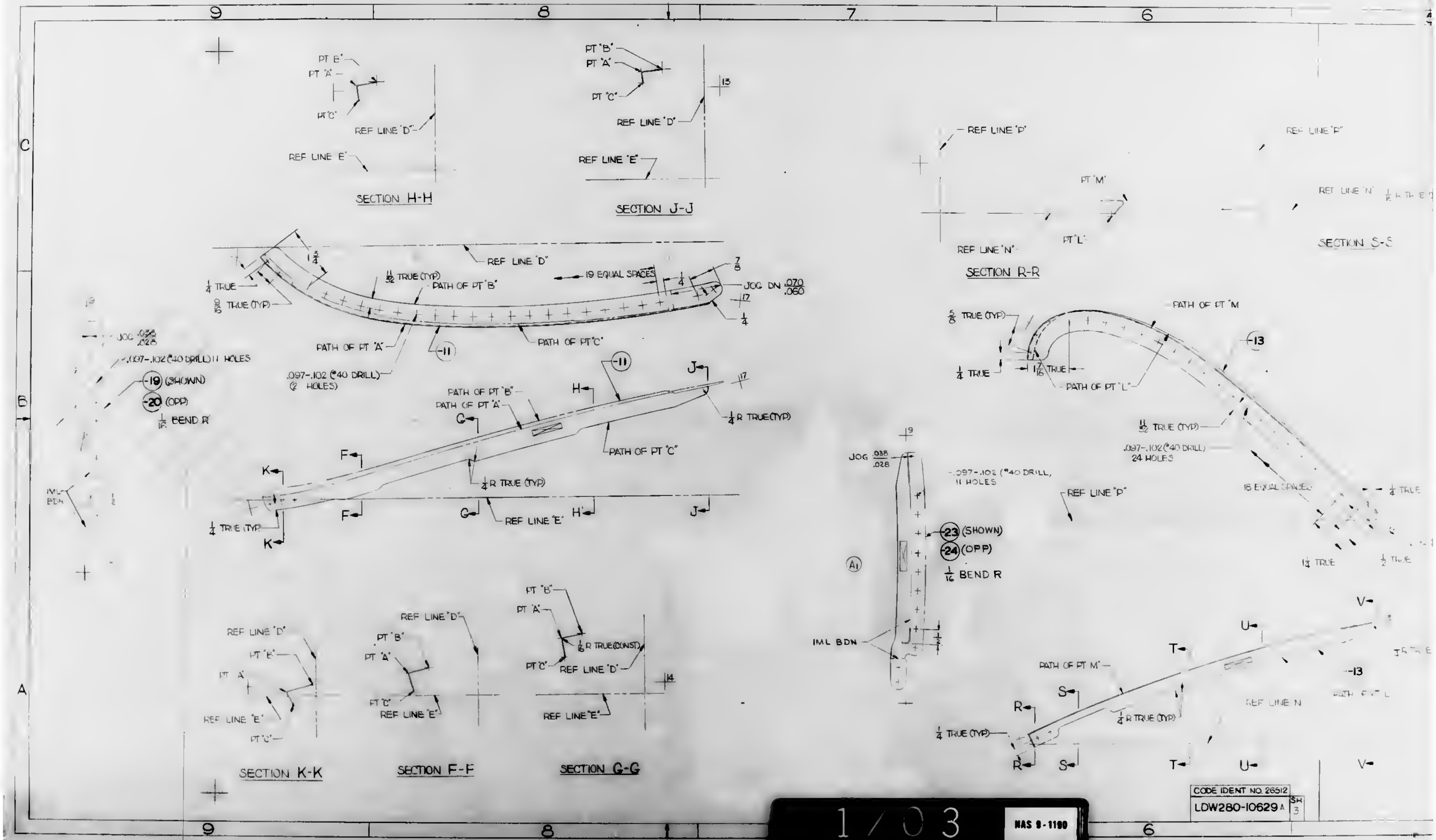
LDW280-10624 A

LDW280-10624 A

CODE IDENT NO 26512
LDW280-10624 3

GRUMMAN AIRCRAFT ENGINEERING CORP., BETHPAGE, L. I., NEW YORK
LEM
J 26512 LDW280-10624 A
SCALE FULL
SHEET 3.00

FOR PHOTO REPRODUCTION K2


9
8
7
6
C
B
A
PT "B"
PT "A"
PT "C"
REF LINE "D"
REF LINE "E"
SECTION H-H
SECTION J-J
13
REF LINE "P"
PT "M"
PT "L"
REF LINE "N"
SECTION R-R
SECTION S-S
REF LINE "D"
1 3/4
11/32 TRUE (TYP)
PATH OF PT "B"
19 EQUAL SPACES
7/8
1/4
JOG DN .070/.060
17
1/4 TRUE
5/16 TRUE (TYP)
PATH OF PT "A"
PATH OF PT "C"
-11
JOG .038/.028
.097-.102 (#40 DRILL) 11 HOLES
-19 (SHOWN)
-20 (OPP)
1/16 BEND R
.097-.102 (#40 DRILL) (2 HOLES)
-11
J
H
G
F
K
1/4 R TRUE (TYP)
1/4 R TRUE (TYP)
REF LINE "E"
1/4 TRUE (TYP)
IML BDN
5/8 TRUE (TYP)
PATH OF PT "M"
-13
1/4 TRUE
1 7/16 TRUE
PATH OF PT "L"
11/32 TRUE (TYP)
.097-.102 (#40 DRILL) 24 HOLES
16 EQUAL SPACES
1/4 TRUE
1 1/2 TRUE
1/2 TRUE
9
JOG .038/.028
.097-.102 (#40 DRILL, 11 HOLES
REF LINE "P"
-23 (SHOWN)
-24 (OPP)
1/16 BEND R
A1
IML BDN
1/2
SECTION K-K
SECTION F-F
SECTION G-G
1/2 R TRUE (CONST)
14
V
U
T
S
R
PATH OF PT M
1/4 R TRUE (TYP)
1/4 TRUE (TYP)
REF LINE N
-13
PATH OF PT L

CODE IDENT NO. 26512
LDW280-10629 A SH 3

1/03

NAS 9-1190

MG 38.1 REV 3-65

GRUMMAN AIRCRAFT ENGINEERING CORP.
CODE IDENT NO. 26512

ENGINEERING ORDER

DWG. NO. LDW280-15493
EO NO. BV
CONTROL INFO NO. LDW280A-[illegible]

FOR -11, LM-3 THRU LM-15, N/A LDW280-53265 WAS
LDW280-23265

DETAIL SPEC REQ		CL III ENGRG CHG		CL I ENGRG CHG	3

REASON FOR EO: CORRECT N/A CALLOUT

DESCRIPTION OF EO: FOR -11, LM3 THRU LM15 N/A WAS LDW280-23265

GAEC C.O. EO RELEASE: FR 11/17/6[illegible]

MODEL	EFFECTIVITY: PROCURING ACTIVITY NO.	GAEC UNIT NO.	SUB CONTR UNIT NO.
LM	LM3(33) THRU LM15(43)		

DRAWING CHANGE REQD		DISPOSITION OF PARTS										
✓		✓		APPROVED BY	[illegible]			—	[illegible]		[illegible]	[illegible]
				DATE	11/15/65			—			11-11-65	11/16/65
REVISE DWG	RECORD CE	REWORK	SCRAP	6	V/01	SUPPORT	RELIAB. GROUP	GROUP LEADER	STRESS GROUP	LIAISON ENGRG	PROJ ENGRG	[illegible]

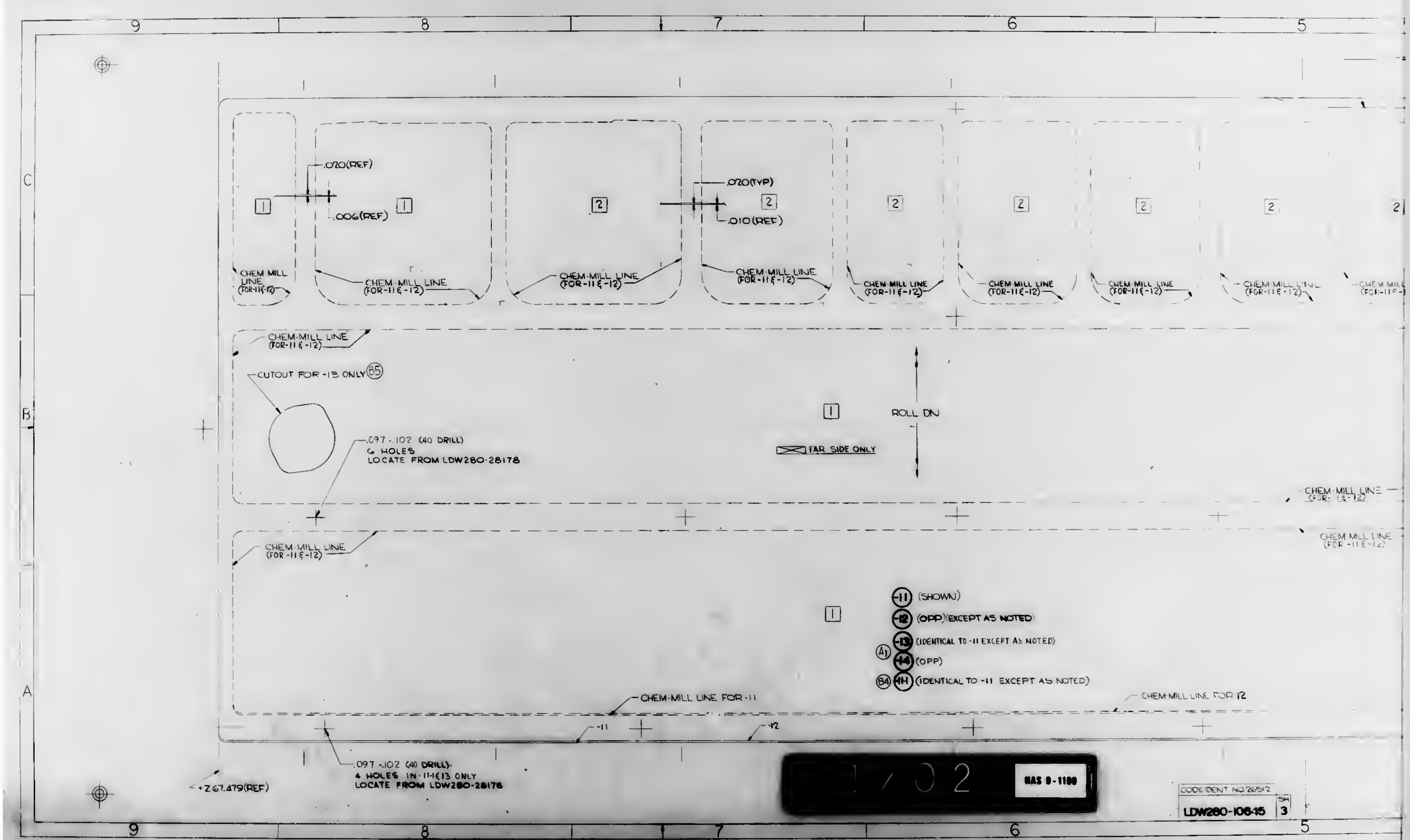
PRIORITY: C

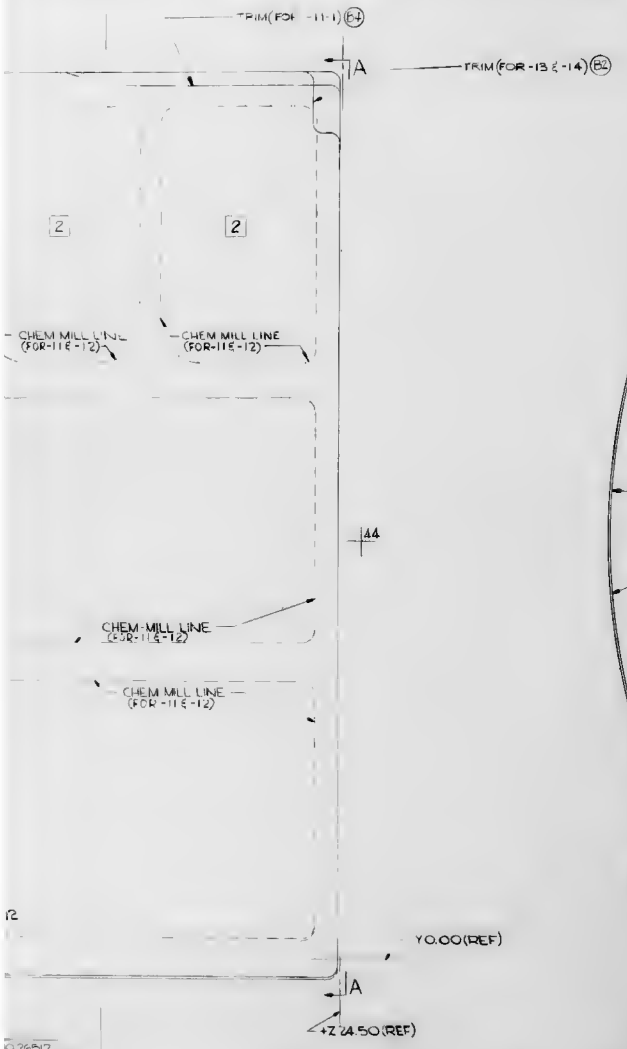
DRAWING TITLE: STIFFENER - A/S MID-SECT. E27 ECS - TRANSDUCER

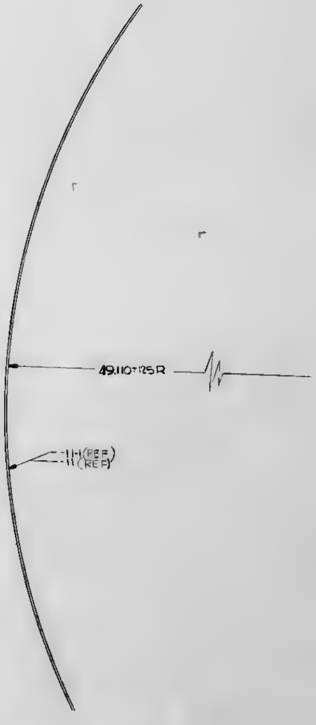
DRAWING NO.: LDW280-15493

EO NO.: BV

ISSUED BY P. ABRAMS X1441 11/2 SECTION VDI - CABIN GROUP NO. 385 PL 385

9
8
7
6
5
C
B
A
.020(REF)
.006(REF)
.020(TYP)
.010(REF)
1
2
CHEM MILL LINE (FOR-11&-12)
CHEM-MILL LINE (FOR-11&-12)
CUTOUT FOR -13 ONLY B5
.097-.102 (40 DRILL) 6 HOLES LOCATE FROM LDW280-28178
ROLL DN
FAR SIDE ONLY
-11 (SHOWN)
-12 (OPP)(EXCEPT AS NOTED)
-13 (IDENTICAL TO -11 EXCEPT AS NOTED)
A1 -14 (OPP)
B4 -11H (IDENTICAL TO -11 EXCEPT AS NOTED)
CHEM-MILL LINE FOR -11
CHEM-MILL LINE FOR 12
-11
-12
.097-.102 (40 DRILL) 4 HOLES IN -11&13 ONLY LOCATE FROM LDW280-28178
+Z 67.479(REF)
1702
NAS 9-1100
CODE IDENT NO. 26512
LDW280-10645
SH 3


TRIM (FOR -11-1) (B4)
A
TRIM (FOR -13 & -14) (B2)
2
2
CHEM MILL LINE (FOR -11 & -12)
CHEM MILL LINE (FOR -11 & -12)
44
CHEM MILL LINE (FOR -11 & -12)
CHEM MILL LINE (FOR -11 & -12)
Y0.00 (REF)
A
+Z 24.50 (REF)
12
0 26512
SH
0645
3


49.110±.125 R
-11-1 (REF)
-11 (REF)

VIEW A-A
NO SCALE

NOTES

1- NO TOOLING HOLES PERMITTED IN PART.
2- MAKE LDW280-10645-11, -11-1 & -12 FROM 2024-T3 ALCLAD BOTH SIDES (SKIN QUALITY). FINISH ALUMALITE 200/R1/EB10 WHICH MAY BE PURCHASED FROM ALUMINUM CO. OF AMERICA (CODE IDENT 01634).
3- THE SURFACE DESIGNATED EXTERIOR SHALL BE PROTECTED WITH STRIPPABLE VINYL COATING # 796 PURCHASED FROM CARROLL PRODUCTS INC. FARMINGDALE, N.Y.
4- THE INTERIOR SURFACE TO BE CHEM-MILLED IN ACCORDANCE WITH LSP14-26100 FINISH ENTIRE SURFACE # 76 (LSP14-9010).
5- MATERIAL, FINISHES, HANDLING AND PERMISSIBLE DEVIATIONS PER LPC-280-16.

LDW280-10645-11, 12 & -11-1

CHEM-MILL LINE TOLERANCE ±1/16 WHERE DEPTH OF ETCH IS .040 OR LESS (EXCEPT AS NOTED) ±1/32 WHERE DEPTH OF ETCH IS GREATER THAN .040

SYMBOL	THICKNESS AFTER CHEM-MILLING	*DEPTH OF CUT
1	.006 +.005 -.001	.014 (REF)
2	.010 +.005 -.001	.010 (REF)
☐		

MANUFACTURING OPERATIONS
UNLESS OTHERWISE SPECIFIED
NOTES CHECKED ✓ APPLY TO THIS DWG.

[illegible]	✓
[illegible]	
[illegible]	
[illegible]	
[illegible]	
[illegible]	
[illegible]	
[illegible]	
[illegible]	
[illegible]	
[illegible]	
[illegible]	
[illegible]	
[illegible]	
[illegible]	
[illegible]	
[illegible] ± 1/32	

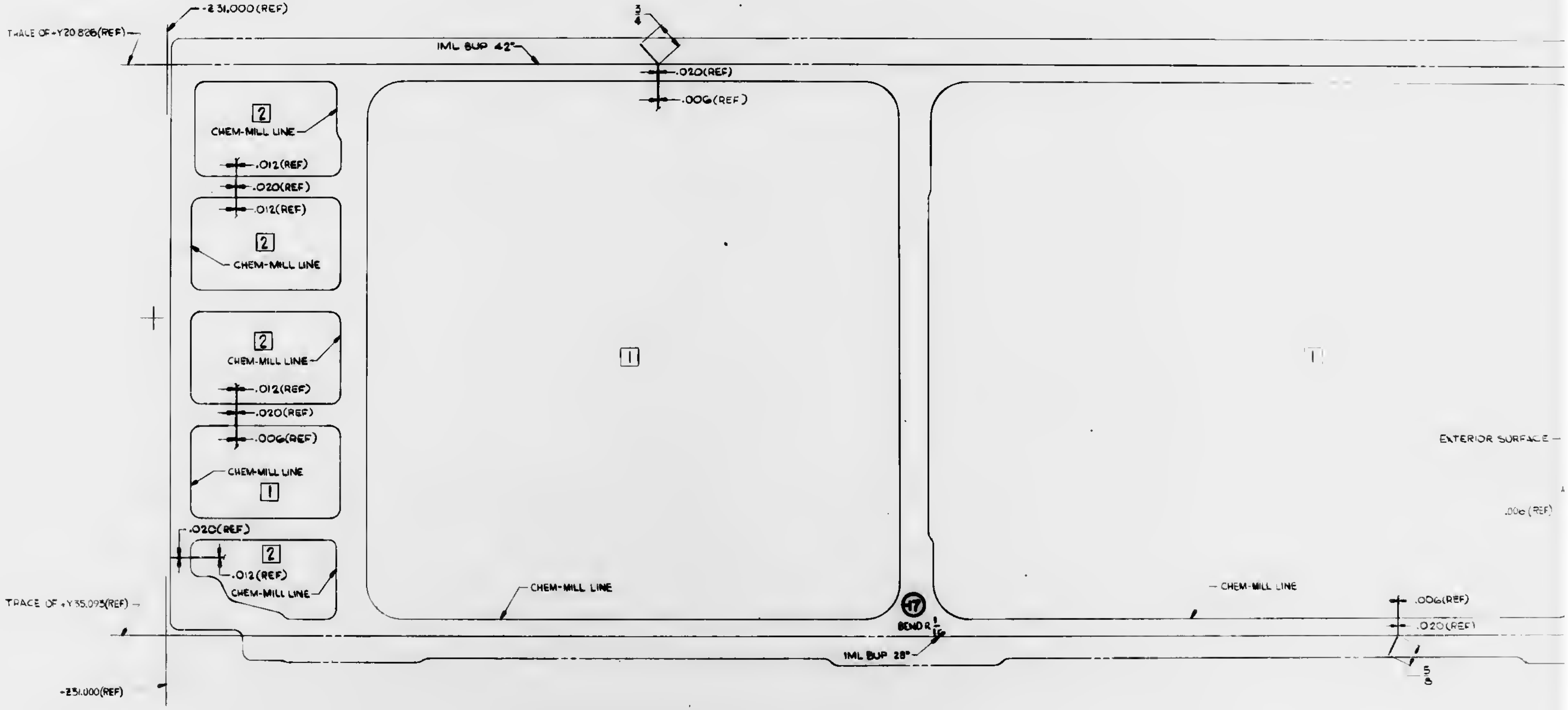
1575 SQ. FT.
469 SQ. FT.

2 / 02
NAS 9-1100

LDW280-10645 B

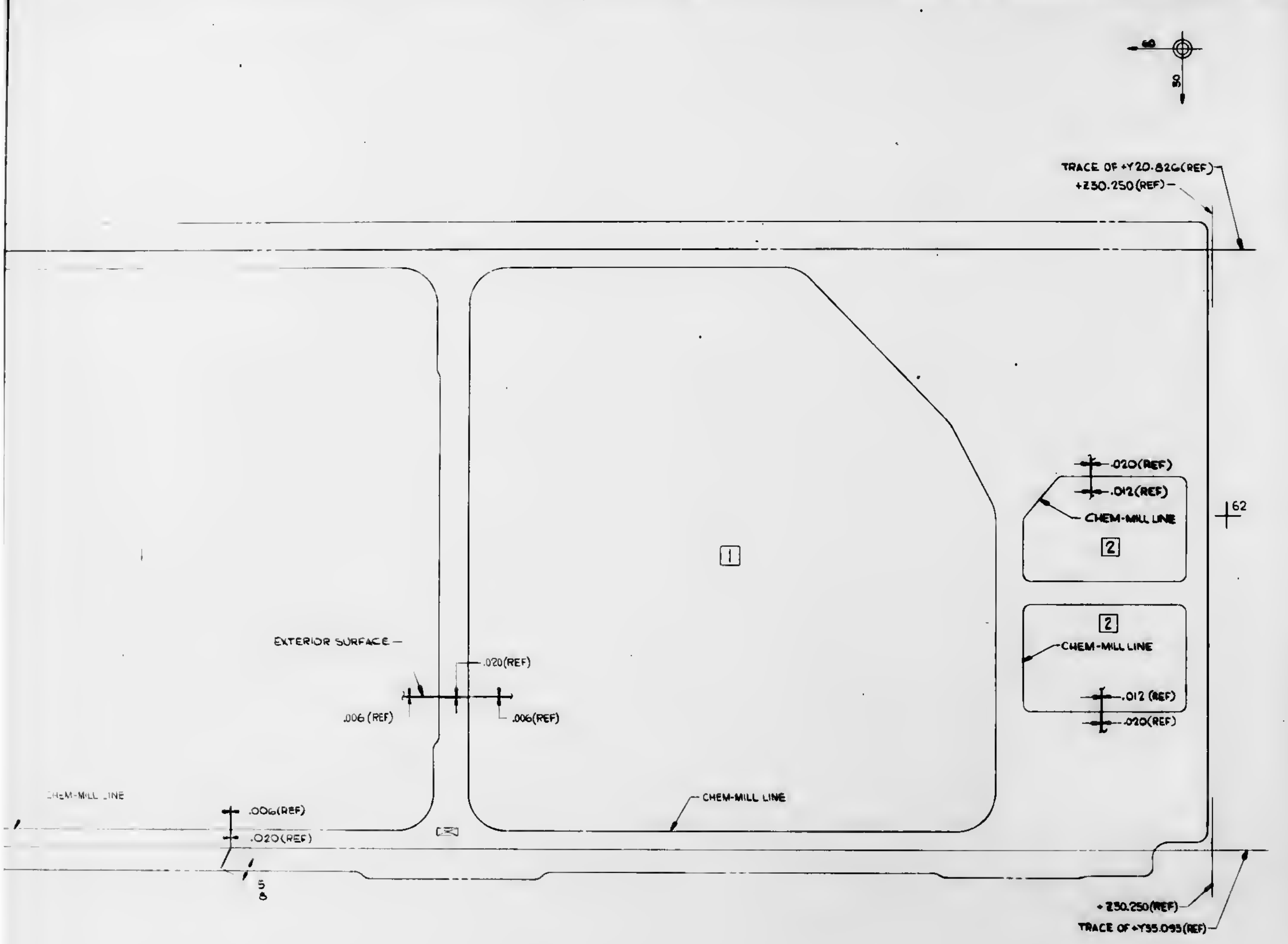
GRUMMAN AIRCRAFT ENGINEERING CORP., BETHPAGE, L.I., NEW YORK
LEM
H 26512 LDW280-10645 B
3.00
2/2

FOR PHOTO REPRODUCTION
K2


-231.000(REF)
TRACE OF +Y20.826(REF)
IML BUP 42°
3/4
.020(REF)
.006(REF)
2
CHEM-MILL LINE
.012(REF)
.020(REF)
.012(REF)
2
CHEM-MILL LINE
2
CHEM-MILL LINE
.012(REF)
.020(REF)
.006(REF)
CHEM-MILL LINE
1
.020(REF)
2
.012(REF)
CHEM-MILL LINE
1
1
EXTERIOR SURFACE
.006(REF)
TRACE OF +Y35.093(REF)
CHEM-MILL LINE
17
BEND R 1/16
IML BUP 28°
CHEM-MILL LINE
.006(REF)
.020(REF)
5/8
-231.000(REF)

[redacted]

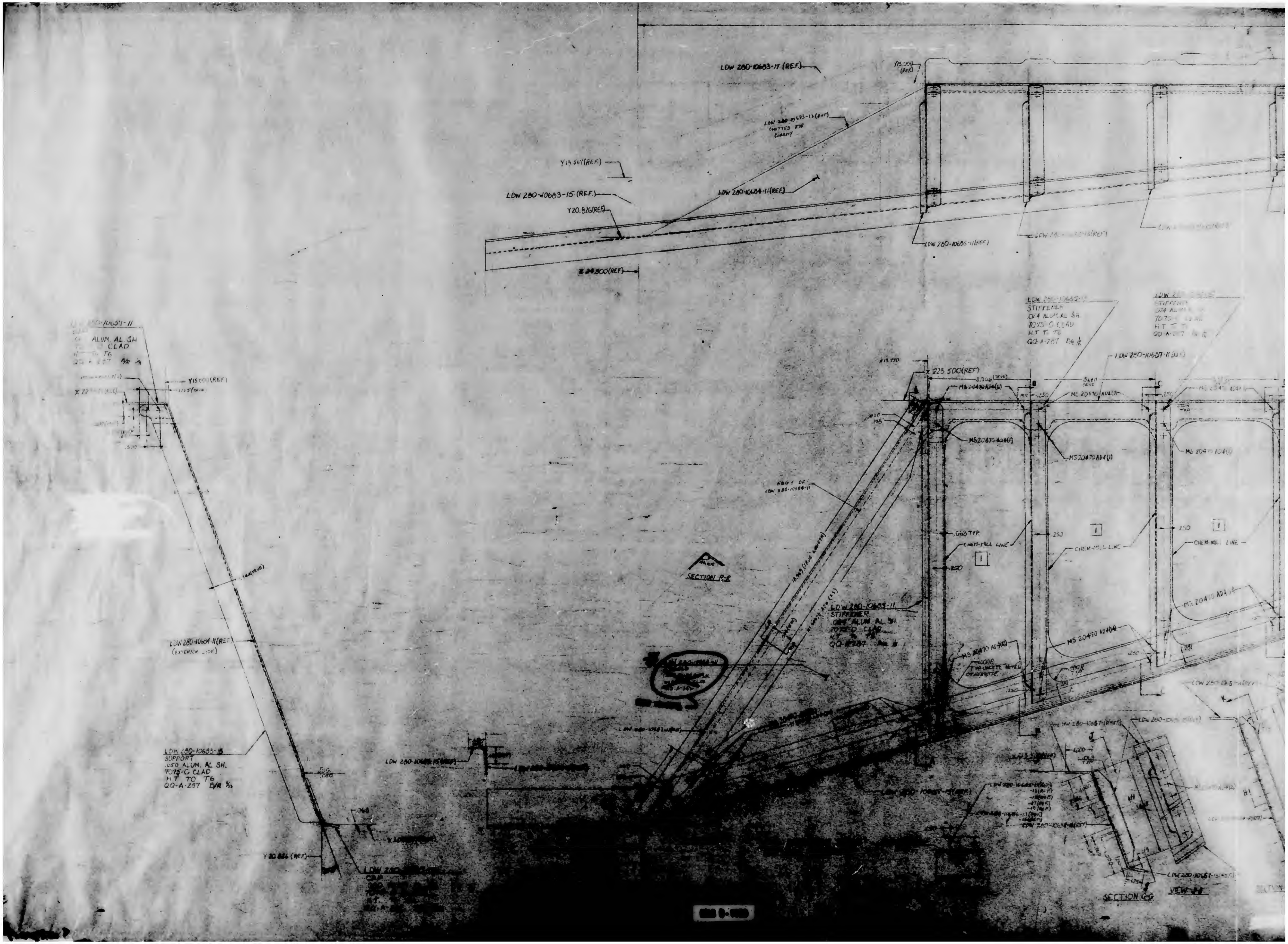
CODE IDENT NO. [illegible]
LDW260-10656 SH 4


TRACE OF +Y20.826(REF)
+Z30.250(REF)
60
30
1
2
2
.020(REF)
.012(REF)
CHEM-MILL LINE
CHEM-MILL LINE
.012 (REF)
.020(REF)
62
EXTERIOR SURFACE
.020(REF)
.006 (REF)
.006(REF)
CHEM-MILL LINE
CHEM-MILL LINE
.006(REF)
.020(REF)
5
8
+Z30.250(REF)
TRACE OF +Y35.095(REF)

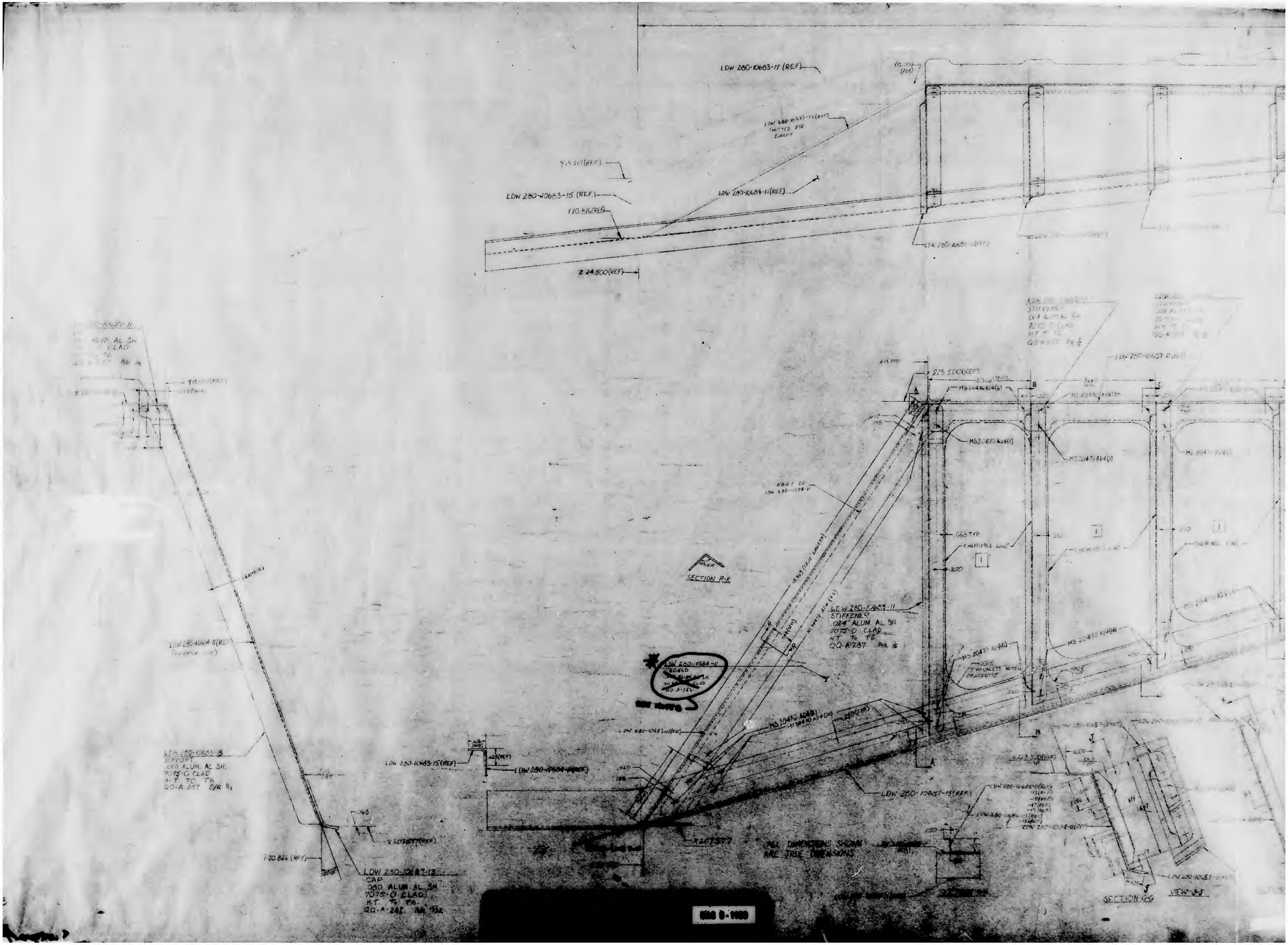
[redacted]

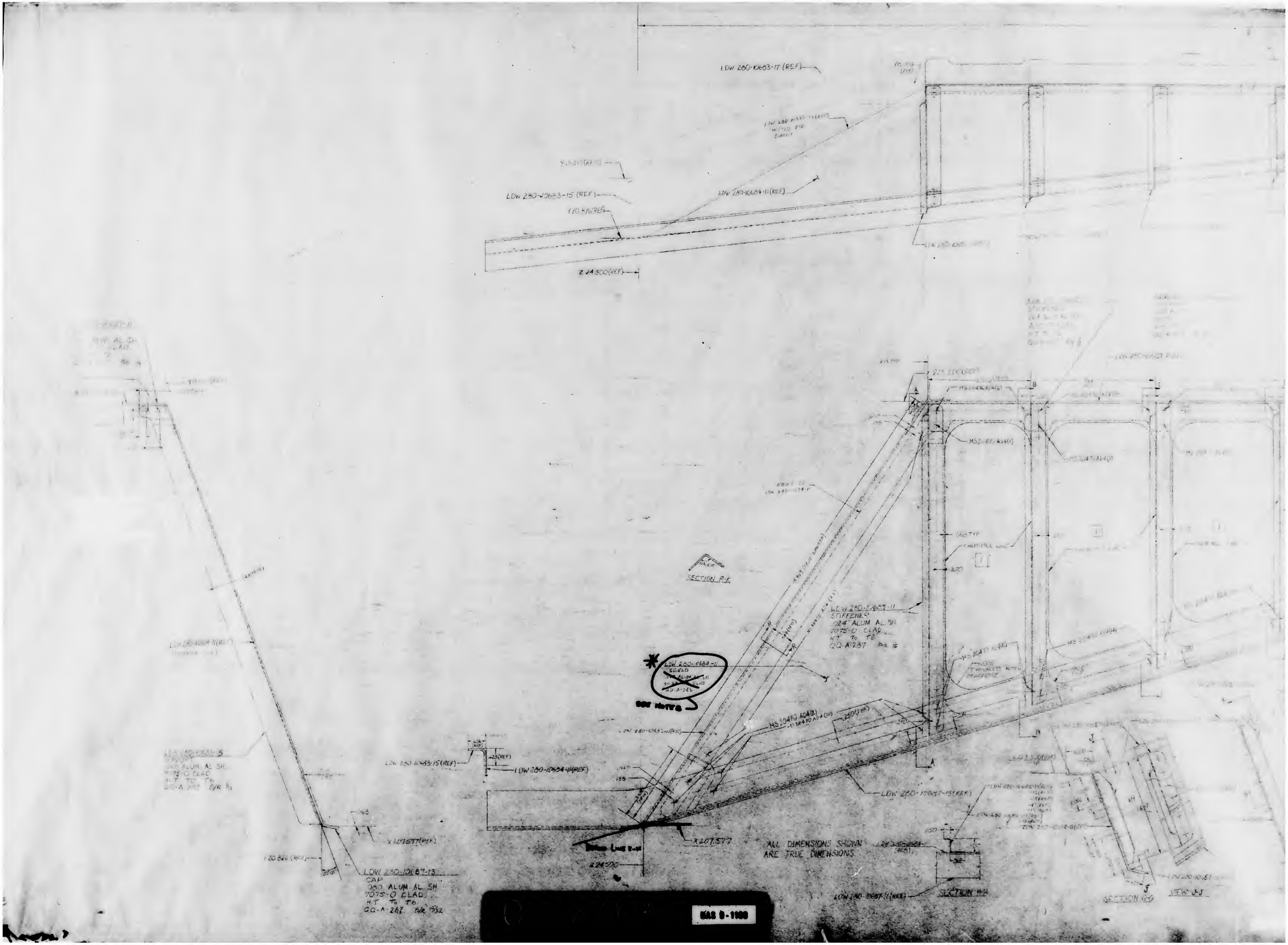
CODE IDENT NO. [illegible]
LDW280-10656 SH 4

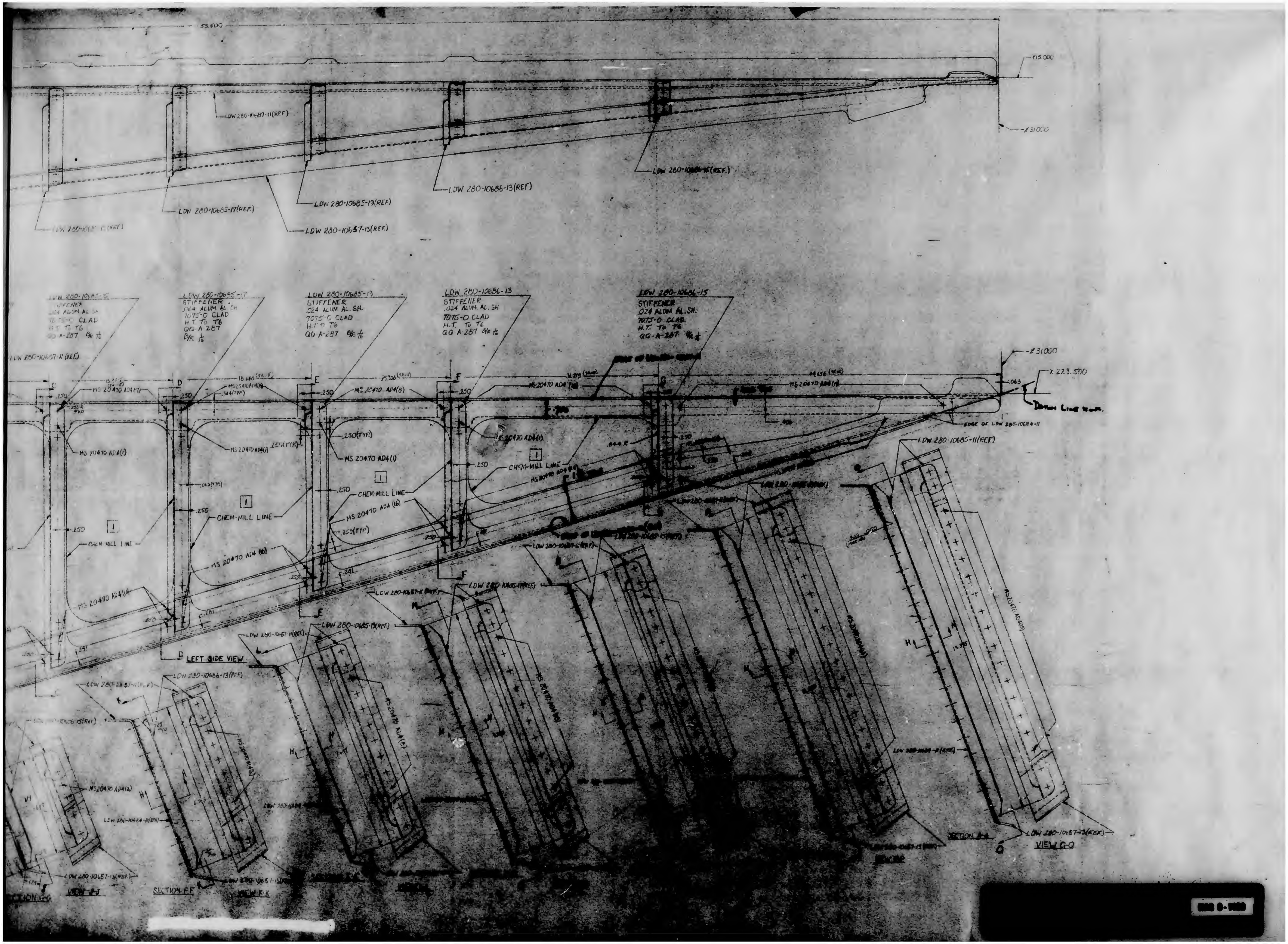
J 26512 LDW280-10656 A
LEM
4.00
FOR PHOTO REPRODUCTION K2



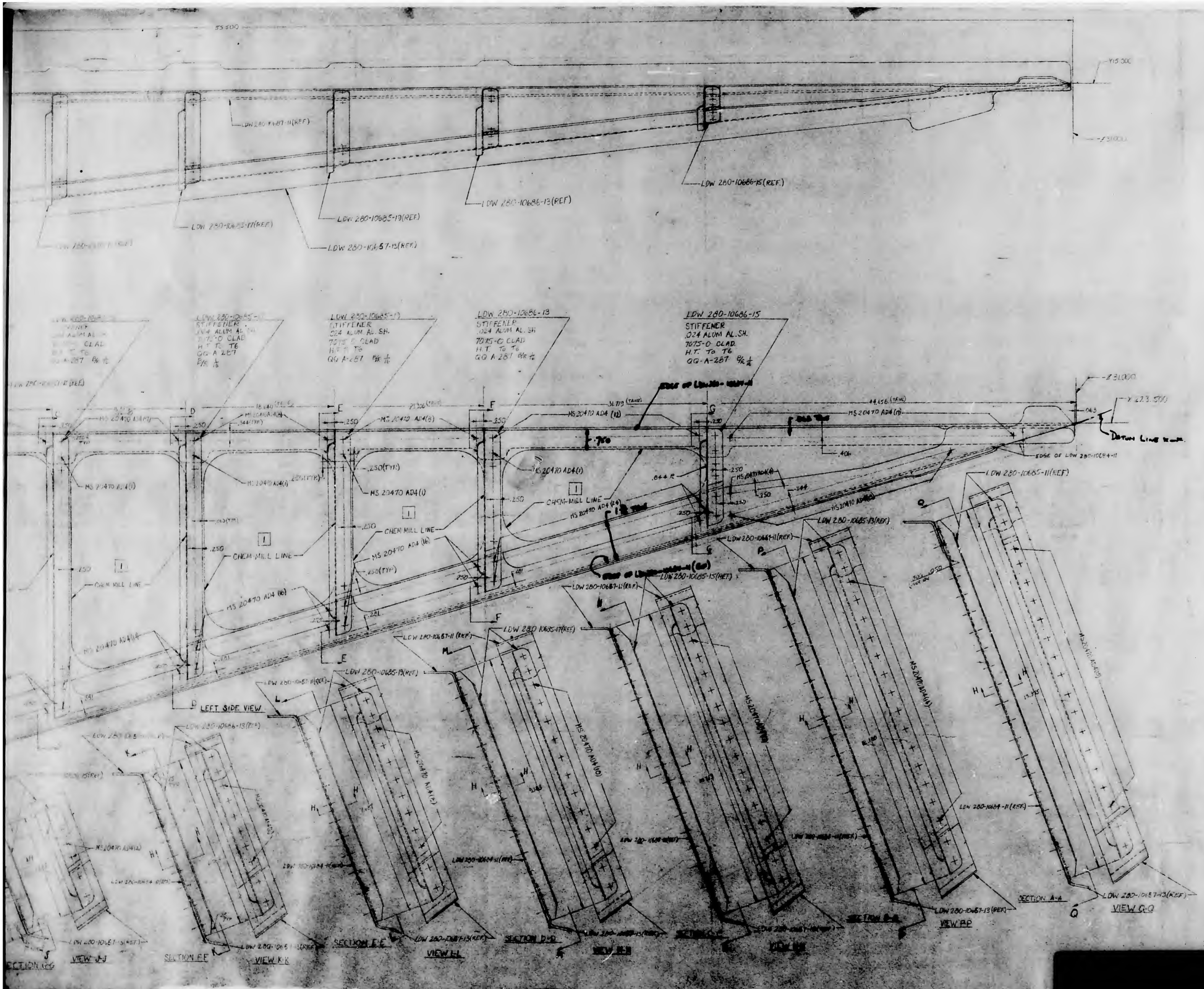
LDW 280-10683-17 (REF.)
Y15.000 (REF)
LDW 280-10685-13 (REF) OMITTED FOR CLARITY
Y13.567 (REF.)
LDW 280-10683-15 (REF.)
Y20.826 (REF)
LDW 280-10684-11 (REF.)
Z 24.300 (REF.)
LDW 280-10685-11 (REF)
LDW 280-10685-11
STIFFENER
.024 ALUM. AL SH.
7075-O CLAD
H.T. TO T6
QQ-A-287 B/R 1/16
LDW 280-10687-11 (REF)
X 223.500 (REF)
3.306 (TRUE)
8.640 (TRUE)
MS 20470 AD4 (6)
MS 20470 AD4 (1)
MS 20470 AD4 (2)
MS 20470 AD4 (4)
.250
.185
EDGE OF LDW 280-10684-11
.063 TYP.
CHEM-MILL LINE
1
18.969 (TRUE LENGTH)
SECTION R-R
LDW 280-10683-11
STIFFENER
.024 ALUM. AL SH.
7075-O CLAD
H.T. TO T6
QQ-A-287 B/R
.100 R TWO UNLESS NOTED OTHERWISE
.281
LDW 280-10651-11
.050 ALUM. AL SH
7075-O CLAD
H.T. TO T6
QQ-A-287 B/R 1/8
Y15.000 (REF)
.125 (TRUE)
.500
LDW 280-10684-11 (REF)
(EXTERIOR SIDE)
LDW 280-10683-15
SUPPORT
.050 ALUM. AL SH.
7075-C CLAD
H.T. TO T6
QQ-A-287 B/R 3/32
T.O.G. .050
.068
Y 20.826 (REF)
CAP
LDW 280-10683-15 (REF)
LDW 280-10657-11 (REF)
H1
SECTION C-C
VIEW B-B


LDW 280-10683-17 (REF.)
LDW 280-10683-13 (REF) OMITTED FOR CLARITY
Y15.367 (REF.)
LDW 280-10683-15 (REF.)
LDW 280-10684-11 (REF.)
Y20.826 (REF.)
Z 24.500 (REF.)
LDW 280-10683-11 (REF.)
LDW 280-10683-15
SUPPORT
.050 ALUM. AL SH.
7075-O CLAD
H.T. TO T6
QQ-A-287 B/R 3/32
LDW 280-10684-11 (REF.)
Y 20.826 (REF.)
X 207.577 (REF.)
LDW 280-10687-13
CAP
.080 ALUM. AL. SH.
7075-O CLAD
H.T. TO T6
QQ-A-287 B/R 7/32
LDW 280-10683-15 (REF.)
LDW 280-10684-11 (REF.)
LDW 280-10653-15 (REF.)
X 207.577
SECTION R-R
*
LDW 280-10684-11
SHIELD
~~.050 ALUM. AL. SH.~~
~~7075-O CLAD~~
~~QQ-A-262~~
EDGE OF LDW 280-10684-11
18.969 (TRUE LENGTH)
MS 20470 AD4 (23)
LDW 280-10685-11
STIFFENER
.024 ALUM. AL. SH.
7075-O CLAD
H.T. TO T6
QQ-A-287 B/R 1/16
MS 20470 AD4 (30)
MS 20470 AD4 (6)
MS 20470 AD4 (1)
MS 20470 AD4 (4)
.100 R TYP UNLESS NOTED OTHERWISE
.060 TYP
CHEM-MILL LINE
.250
X 213.500 (REF)
LDW 280-10687-13 (REF.)
LDW 280-10685-11 (REF.)
ALL DIMENSIONS SHOWN ARE TRUE DIMENSIONS
SECTION G-G
VIEW J-J
A
B
C
R
J

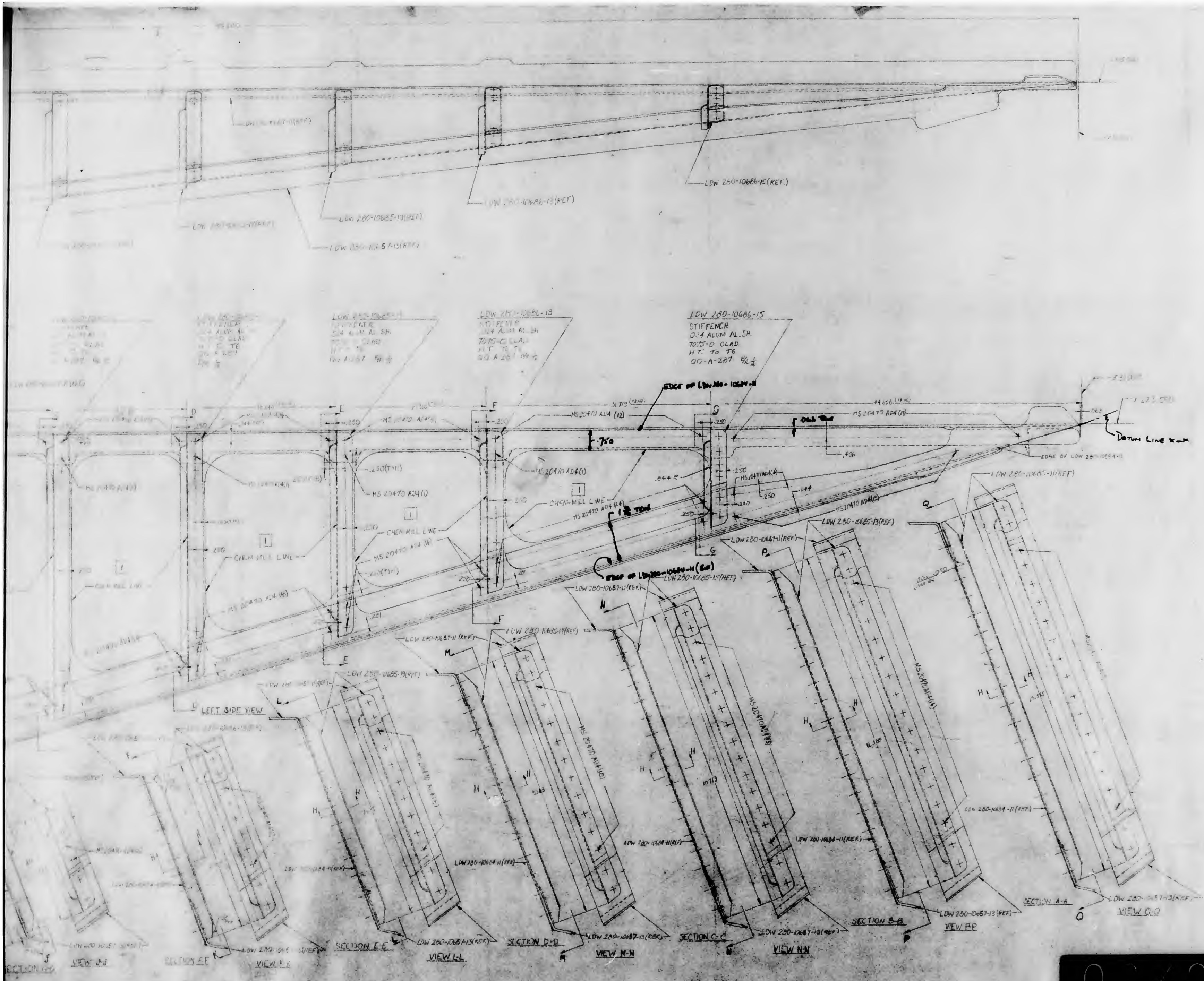

LDW 280-10683-17 (REF)
LDW 280-10683-15 (REF)
LDW 280-10684-11 (REF)
120.826 (REF)
Z 24.500 (REF)
SECTION R-R
LDW 280-10685-11
STIFFENER
.024" ALUM AL. SH
7075-O CLAD
H.T. To T6
QQ-A-287
* LDW 280-10684-11
SHIELD
~~ALUM AL SH~~
~~CLAD~~
~~QQ-A-262~~
SEE NOTES
MS 20470 AD4(2)
MS 20470 AD4 (30)
.250 (TYP)
LDW 280-10653-15 (REF)
LDW 280-10683-15 (REF)
LDW 280-10684-11 (REF)
.250
.188
LDW 280-10687-13 (REF)
X 207.577
Z 24.500
ALL DIMENSIONS SHOWN ARE TRUE DIMENSIONS
LDW 280-10687-11 (REF)
SECTION H-H
SECTION G-G
VIEW J-J
LDW 280-10687-13
CAP
.080 ALUM. AL. SH.
7075-O CLAD
H.T. To T6
QQ-A-287
X 207.577 (REF)
120.826 (REF)
.068
A
B
NAS 9-1100

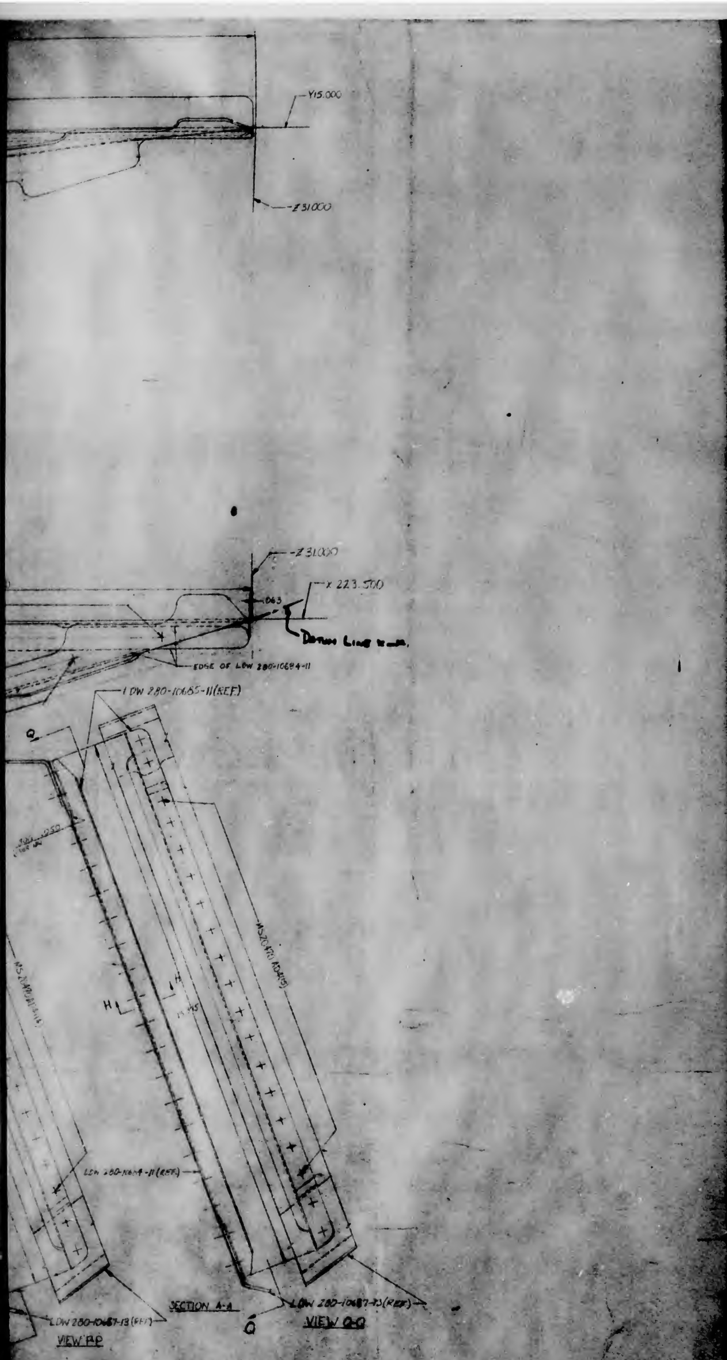

55.500
Y15.000
Z31.000
LDW 280-11487-11(REF.)
LDW 280-10686-15(REF.)
LDW 280-10686-13(REF)
LDW 280-10685-19(REF.)
LDW 280-10685-17(REF.)
LDW 280-10657-13(REF.)
LDW 280-10685-15(REF.)
LDW 280-10685-15
STIFFENER
.024 ALUM AL SH
7075-O CLAD
H.T. TO T6
QQ-A-287 B/R 1/16
LDW 280-10685-17
STIFFENER
.024 ALUM. AL SH
7075-O CLAD
H.T. TO T6
QQ-A-287
B/R 1/16
LDW 280-10685-19
STIFFENER
.024 ALUM. AL. SH.
7075-O CLAD
H.T. TO T6
QQ A-287 B/R 1/16
LDW 280-10686-13
STIFFENER
.024 ALUM. AL. SH.
7075-O CLAD
H.T. TO T6
QQ A-287 B/R 1/16
LDW 280-10686-15
STIFFENER
.024 ALUM. AL. SH.
7075-O CLAD
H.T. TO T6
QQ-A-287 B/R 1/16
LDW 280-10657-11 (REF.)
Z31.000
X 273.500
DATUM LINE
EDGE OF LDW 280-10684-11
C
D
E
F
G
18.140
23.306
MS 20470 AD4(11)
MS 20470 AD4(8)
MS 20470 AD4(1)
MS 20470 AD4(16)
MS 20470 AD4(14)
.344(TYP)
.250
.250(TYP)
.250 R TYP
CHEM-MILL LINE
CHEM MILL LINE
I
LDW 280-10685-11(REF.)
LDW 280-10687-11(REF.)
LDW 280-10685-13(REF.)
LDW 280-10686-13(REF.)
LDW 280-10657-11(REF.)
LDW 280-10684-11(REF.)
LDW 280-10657-13(REF.)
MS 20470 AD4(2)
MS 20470 AD4(6)
H
LEFT SIDE VIEW
SECTION G-G
VIEW J-J
SECTION F-F
VIEW K-K
SECTION H-H
VIEW Q-Q
Q
LDW 280-10687-13(REF.)

[redacted]


55.500
Y15.000
Z31.000
LDW 280-10687-11(REF)
LDW 280-10686-15(REF.)
LDW 280-10686-13(REF)
LDW 280-10685-13(REF)
LDW 280-10685-17(REF)
LDW 280-10657-13(REF)
LDW 280-10685-11
STIFFENER
.024 ALUM AL. SH.
7075-O CLAD
H.T. TO T6
QQ-A-287 B/R 1/16
LDW 280-10685-13
STIFFENER
.024 ALUM. AL. SH.
7075-O CLAD
H.T. TO T6
QQ-A-287 B/R 1/16
LDW 280-10686-13
STIFFENER
.024 ALUM AL. SH.
7075-O CLAD
H.T. TO T6
QQ-A-287 B/R 1/16
LDW 280-10686-15
STIFFENER
.024 ALUM AL. SH.
7075-O CLAD.
H.T. TO T6
QQ-A-287 B/R 1/16
Z31.000
X 423.500
DATUM LINE X-X
EDGE OF LDW 280-10684-11
EDGE OF LDW 280-10684-11
C
D
E
F
G
18.140 (TYP)
23.306 (TYP)
31.719 (TYP)
44.656 (TYP)
MS 20470 AD4 (7)
MS 20470 AD4 (8)
MS 20470 AD4 (12)
MS 20470 AD4 (11)
MS 20470 AD4 (1)
MS 20470 AD4 (16)
MS 20470 AD4 (14)
MS 20470 AD4 (24)
.250
.250 (TYP)
.344 (TYP)
.063
.750
.406
.844 R
CHEM-MILL LINE
CHEM MILL LINE
1
LDW 280-10685-11(REF)
LDW 280-10685-13(REF)
LDW 280-10685-15(REF)
LDW 280-10687-11(REF)
LDW 280-10685-17(REF)
LDW 280-10684-11(REF)
LDW 280-10687-13(REF)
LDW 280-10686-13(REF)
LEFT SIDE VIEW
H
L
M
N
P
Q
K
J
SECTION G-G
VIEW J-J
SECTION F-F
VIEW K-K
SECTION E-E
VIEW L-L
SECTION D-D
VIEW M-M
SECTION C-C
VIEW N-N
SECTION B-B
VIEW P-P
SECTION A-A
VIEW Q-Q

NAS 9-1189


LDW 280-10686-15(REF.)
LDW 280-10686-13(REF)
LDW 280-10685-13(REF)
LDW 280-10657-13(REF)
LDW 280-10686-13
STIFFENER
.024 ALUM AL.SH.
7075-O CLAD
H.T. TO T6
QQ-A-287
LDW 280-10686-15
STIFFENER
.024 ALUM AL.SH.
7075-O CLAD
H.T. TO T6
QQ-A-287 B/R 1/16
EDGE OF LDW 280-10684-11
MS 20470 AD4 (11)
.063 TYP
.750
.406
DATUM LINE X-X
EDGE OF LDW 280-10684-11
LDW 280-10685-11(REF)
MS 20470 AD4(1)
CHEM MILL LINE
MS 20470 AD4(4)
.644 R
.250
.344
MS 20470 AD4(12)
1 1/2 TYP
EDGE OF LDW 280-10684-11 (REF)
LDW 280-10685-15(REF)
LDW 280-10685-13(REF)
LDW 280-10687-11(REF)
LDW 280-10685-17(REF)
LDW 280-10684-11(REF)
LDW 280-10687-13(REF)
LDW 280-10657-13(REF)
LEFT SIDE VIEW
SECTION A-A
VIEW Q-Q
SECTION B-B
VIEW P-P
SECTION C-C
VIEW N-N
SECTION D-D
VIEW M-M
SECTION E-E
VIEW L-L
SECTION F-F
VIEW K-K
VIEW J-J
SECTION G-G
C
D
E
F
G
H
J
K
L
M
N
P
Q


Y15.000
Z31.000
Z31.000
X 223.500
.063
DATUM LINE
EDGE OF LDW 280-10684-11
LDW 280-10685-11(REF)
Q
H
LDW 280-10684-11 (REF)
LDW 280-10687-13(REF)
SECTION A-A
LDW 280-10687-13(REF)
VIEW P-P
VIEW Q-Q

NOTES

1. [illegible] SHALL BE [illegible]

2a. MAKE LDW 280-10684-11 FROM 2024-[illegible] ALCLAD BOTH SIDES (SKIN QUALITY). FINISH ALUMALITE 200/R1/EBIC WHICH MAY BE PURCHASED FROM ALUMINUM Co. of AMERICA (CODE IDENT. 01634).

b. THE SURFACE DESIGNATED EXTERIOR SHALL BE PROTECTED WITH STRIPPABLE VINYL COATING #796 PURCHASED FROM CARROLL PRODUCTS INC., FARMINGDALE, N.Y.

c. REMOVE FINISH ALUMALITE 200/R1/EBIC (ANODIZE) FROM INTERIOR SURFACE & REFINISH AS FOLLOWS

THE INTERIOR SURFACE TO BE CHEM-MILLED IN ACCORDANCE WITH LSP 19-26100, FINISH ENTIRE SURFACE #76 (LSP 14-9010).

~~[illegible] HEADS OF ALL RIVETS TO BE ON EXTERIOR [illegible]~~

3. THIS DRAWING WILL BE REDRAWN ON A PRODUCTION FORMAT.

4. NO TOOLING HOLES PERMITTED IN PARTS

~~5~~ FINISH [illegible] SHALL BE APPLIED TO CHEM-MILL SURFACE

6. DRAWING MAY BE SCALED FOR DIMENSIONS NOT SHOWN.

~~7. ALL PARTS I.T.~~

8. CORNER TRIM RADIUS ON FLAT PATTERN OPTIONAL. ¼ R MAX

~~9. [illegible] EDGE DISTANCE [illegible] UNLESS NOTED [illegible]~~

10. BEND RADIUS FOR .020 THICK MATERIAL = 1/16

11. TOLERANCE ON [illegible] +.010 -.000.

SEE NOTE 5

[illegible]

SHIELD - ASC. STAGE - M/S

E[illegible] BAY SHIELD - LH. - THERMAL

[illegible] LMS9-1100 [illegible] TYPE II

J

LDW 280-10684

3

LDW 280-10684

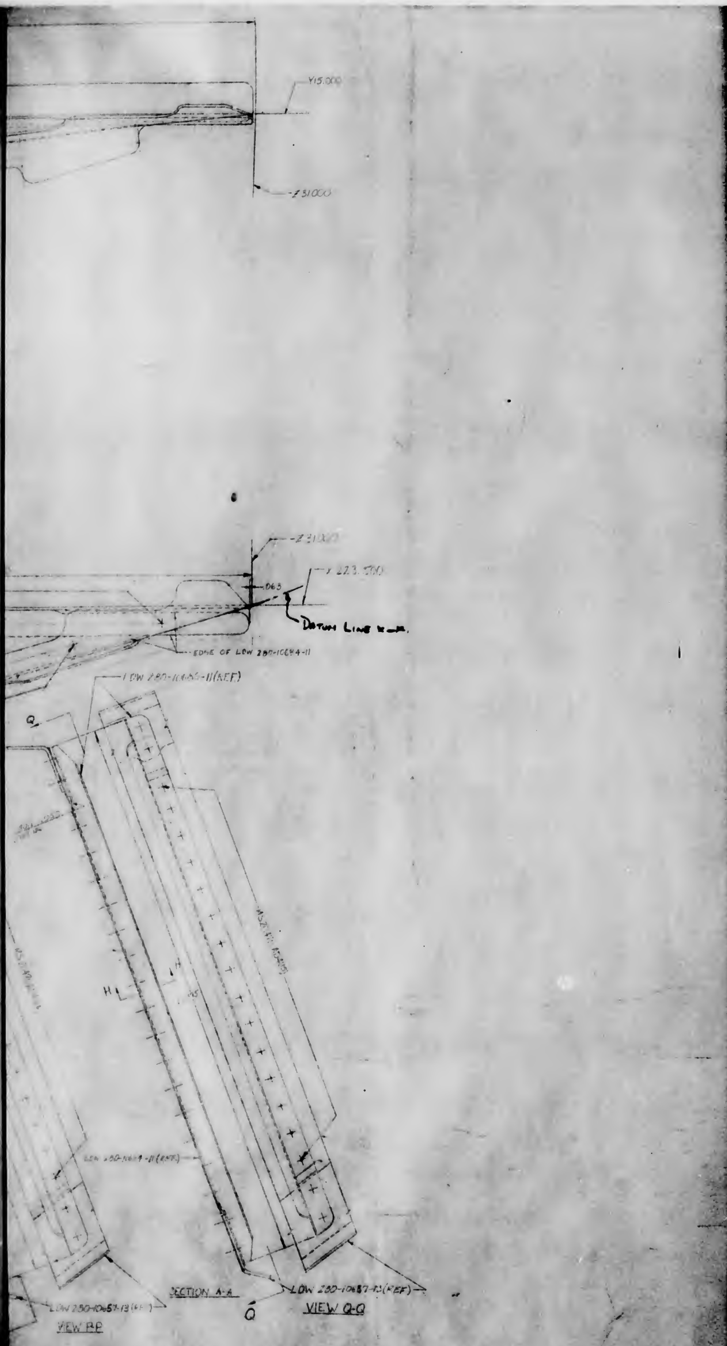
PRINT TRIM LINES

FULL SIZE SHEET AREA (IN X)

½ SIZE SHEET AREA (% OF FULL)

PRINTING INFO ONLY

DWG. SIZE 36 X



SYM	PROCESSES	STD SPEC
CM	CHEM-MILLING	LSP-14-36100

MANUFACTURING OPERATIONS

REVISIONS

NOTES

*1- [illegible]

2a. MAKE LDW 280-10684-11 FROM 2024 T3 ALCLAD BOTH SIDES (SKIN QUALITY). FINISH ALUMALITE 200/R/FEB WHICH MAY BE PURCHASED FROM ALUMINUM Co of AMERICA (CODE IDENT 0034)

b. THE SURFACE DESIGNATED EXTERIOR SHALL BE PROTECTED WITH STRIPPABLE VINYL COATING #736 PURCHASED FROM CARROLL PRODUCTS INC., FARMINGDALE, N.Y.

c. REMOVE FINISH ALUMALITE 200/R/FEB (ANODIZE) FROM INTERIOR SURFACE & REFINISH AS FOLLOWS

THE INTERIOR SURFACE TO BE CHEM-MILLED IN ACCORDANCE WITH LSP 14-36100, FINISH ENTIRE SURFACE #76 (LSP 4-9010)

3. THIS DRAWING WILL BE REDRAWN ON A PRODUCTION FORMAT.

4. NO TOOLING HOLES PERMITTED IN PARTS

5. FINISH #76 SHALL BE APPLIED TO CHEM-MILL SURFACE

6. DRAWING MAY BE SCALED FOR DIMENSIONS NOT SHOWN

~~7. ALL PARTS 1 of 1~~

8. CORNER TRIM RADIUS ON FLAT PATTERN OPTIONAL. ¼ R MAX

10. BEND RADIUS FOR .020 THICK MATERIAL = 1/16

11. TOLERANCE ON JOGGLES +.010 -.000.

LDW 280-10684-11

CHEM-MILL LINE TOLERANCE ±1/16 WHERE DEPTH OF ETCH IS .040 OR LESS (EXCEPT AS NOTED) ±1/32 WHERE DEPTH OF ETCH IS GREATER THAN .040

SYMBOL	THICKNESS AFTER CHEM-MILLING	DEPTH OF CUT
1	.006 ±.002	.014 (REF)

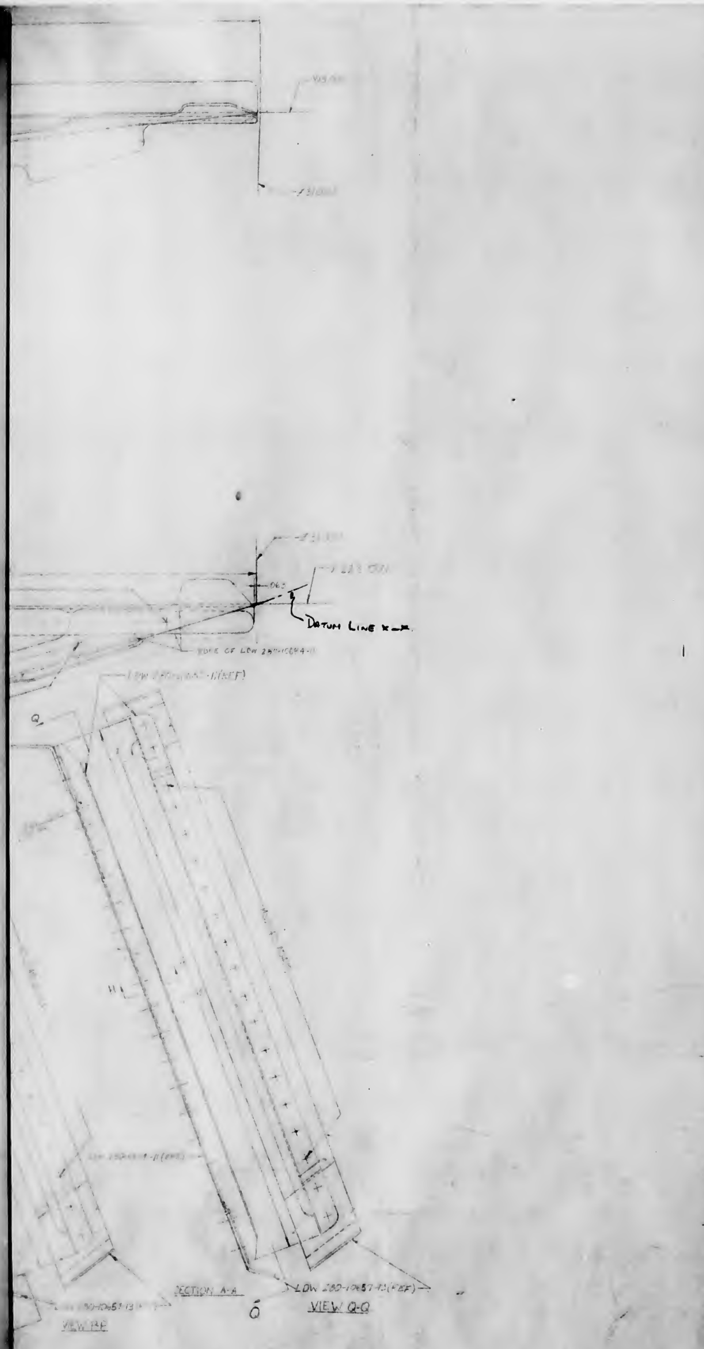
	PART OR IDENTIFYING NO.			NOMENCLATURE OR DESCRIPTION	MATERIAL	GOVT SPEC	ENGR. SPEC	STOCK SIZE (IN.)	PROCESS SYMBOL	FINISH NO.	UNIT WT	ZONE
				~~RIVETS~~								
				~~CLIP~~								
				~~CLIP~~								
				~~STIFFENER~~								
				~~STIFFENER~~								
				~~STIFFENER~~								
				~~STIFFENER~~								
				~~STIFFENER~~								
				~~STIFFENER~~								
				~~STIFFENER~~								
1	LDW 280-10684-11			SHIELD	SEE NOTE 2	QQ-A-362		.020	CM	SEE NOTE 5		

GRUMMAN AIRCRAFT ENGRG CORP
BETHPAGE, L.I., N.Y.

SHIELD - ASC. STAGE - M/S
ENGINE BAY SHIELD - LH - THERMAL
CONTRACT NO. NAS 9-1100 DOCUMENTATION TYPE II
CODE IDENT NO. 26512 SIZE J LDW 280-10684
CONTRACT LINE ITEM SHEET

3

LDW 280-10684



NO.	FINISHES	GRUMMAN STD SPEC	MILITARY SPEC NO.
2	CADMIUM PLATE	G. S. S.	
10	ZINC CHROMATE PRIMER	G. S. S.	
15	TINTED PRIMER: 1 COAT	G. S. S.	
70	ALODINE	G. S. S.	
80	ANODIZE	G. S. S.	

RECORD E. O.'s		
MODEL	E O NUMBER	MODULE NO.

SYM	PROCESSES	GRUMMAN STD SPEC	MILITARY SPEC NO.
	AL HEAT TREAT		MIL-H-6088
	MAGNAFLUX		MIL-I-6868
	PENETRANT INSPECTION (ZYGLO)		MIL-I-6866
	THREADING		MIL-S-7742
	STEEL HEAT TREAT PSI ROCKWELL C TO C		
CM	CHEM-MILLING	LSP-14-26120	

MANUFACTURING OPERATIONS

NOTES CHECKED ✓ APPLY TO THIS DWG.	
ALL DIMENSIONS SHOWN TO BE MET AFTER CADMIUM PLATING. THICKNESS OF PLATE .0003 MIN TO .0005 MAX. MIN THICKNESS TO BE .0002 ON THREADED AREAS. NO ALLOWANCE FOR PLATING IN HOLES EXCEPT AS NOTED.	
REMOVE ALL BURRS. BREAK ALL EDGES .015-.031 EXCEPT AS NOTED.	✓
125 SURFACE ROUGHNESS INCLUDING REAMED HOLES PER MIL-STD-10 EXCEPT AS NOTED.	
250 FOR ALL DRILLED HOLES UNLESS OTHERWISE SPECIFIED.	
HOLES MUST BE KEPT FREE OF CHROME PLATING SOLUTION.	
RUBBER PART NUMBER AND ALL OTHER MARKINGS IN REGION MARKED ⊠ USE BOTH SIDES IF NECESSARY.	✓
FILLET AND INSIDE CORNER RADII TOLERANCES .010R TO .060R ± .010 .061R TO .200R ± .015 OVER .200R ± .030	
DEPTH SHOWN FOR TAPPED HOLES IS FULL THDS. 2-3 IMP THDS BEYOND PERMISSIBLE.	
EXTERNAL THREAD LENGTH SHOWN INCLUDES 2 IMPERFECT THREADS MAX.	
DO NOT CADMIUM PLATE & PAINT HOLES OR SURFACES MARKED WITH DOUBLE ASTERISK.	
MISMATCH STEP OF ± .005 PERMISSIBLE DUE TO CHANGE OF CUTTERS AT INSIDE INTERSECTING SURFACES.	
DIAMETERS MARKED MUST BE CONCENTRIC WITHIN FULL INDICATOR READING	
INSPECTION INFORMATION MINIMUM PERMISSIBLE AVERAGE EDGE DISTANCE MARKED 10	
SYMBOL ƒ DENOTES SURFACE TO BE MACHINED	
UNLESS OTHERWISE SPECIFIED TOLERANCE ON FLANGES IS ± 1/32	✓

REVISIONS

REVISION LETTER	ITEM NO.	ZONE	AUTHORITY FOR REVISION: GRUMMAN INFO ONLY DCRF OR ECP	CLASS II	CLASS I	SET SPEC REQ	ENGRG ORDER	DESCRIPTION	REVISED BY AND DATE	EFFECTIVE ON MODULE NUMBER	DISPOSITION OF EXIST PARTS: RE-WORK	SCRAP	ENGRG APPD	GOVT APPD

NOTES

*1- [illegible]

2. [illegible] LDW 280-10684-11 [illegible] SIDE [illegible] (ALLOY). FINISH ALUMALITE 2[illegible] MAY BE [illegible] ALUMINUM CO. OF AMERICA [illegible]

b. THE SURFACE DESIGNATED EXTERIOR SHALL BE PROTECTED WITH STRIPPABLE VINYL COATING #73 [illegible] FROM [illegible] PRODUCTS INC., FARMINGDALE, N.Y.

c. REMOVE FINISH ALUMALITE [illegible] (ANODIZE) FROM INTERIOR SURFACE & REFINISH AS FOLLOWS:

THE INTERIOR [illegible] TO BE [illegible] IN ACCORDANCE WITH LSP [illegible], FINISH EITHER SURFACE [illegible]

~~[illegible]~~

3. THIS DRAWING WILL BE REDRAWN ON A PRODUCTION FORMAT.

4. NO TOOLING HOLES PERMITTED IN PARTS

5. FINISH #12 SHALL BE APPLIED TO CHEM-MILL SURFACE

6. DRAWING MAY BE SCALED FOR DIMENSIONS NOT SHOWN

~~7. ALL PARTS [illegible]~~

8. CORNER TRIM RADIUS ON FLAT PATTERN OPTIONAL, ¼ R MAX

~~9. [illegible] EDGE DISTANCE FOR ALL RIVETS UNLESS NOTED OTHERWISE.~~

10 BEND RADIUS FOR .020 THICK MATERIAL = 1/16

11. TOLERANCE ON JOGGLES $^{+.010}_{-.000}$

LDW 280-10684-11

CHEM-MILL LINE TOLERANCE ±1/16 WHERE DEPTH OF ETCH IS .040 OR LESS (EXCEPT AS NOTED)
± 1/32 WHERE DEPTH OF ETCH IS GREATER THAN .040

SYMBOL	THICKNESS AFTER CHEM-MILLING	DEPTH OF CUT
1	.006 ± .002	.014 (REF)

QTY REQ'D PER ASSY	PART OR IDENTIFYING NO.	I&T	CODE IDENT	NOMENCLATURE OR DESCRIPTION	MATERIAL	GOVT SPEC	COML SPEC	STOCK SIZE (FA)	PROCESS SYMBOL	FINISH NO.	UNIT WT	ZONE
	~~MS 20470 AD4~~			~~RIVET~~								
	~~LDW 280-[illegible]~~			~~CAP~~								
	~~LDW 280-[illegible]~~			~~CAP~~								
	~~LDW 280-[illegible]~~			~~STIFFENER~~								
	~~LDW 280-[illegible]~~			~~STIFFENER~~								
	~~LDW 280-[illegible]~~			~~STIFFENER~~								
	~~LDW 280-[illegible]~~			~~STIFFENER~~								
	~~LDW 280-[illegible]~~			~~STIFFENER~~								
	~~LDW 280-[illegible]~~			~~STIFFENER~~								
	~~LDW 280-[illegible]~~			~~STIFFENER~~								
1	LDW 280-10684-11	E		SHIELD	SEE NOTE 2	QQ-A-362		.020	CM	SEE NOTE 5		
	~~LDW 280-10689-15~~			~~SUPPORT~~								
	~~LDW 280-25225-1~~	~~2~~		~~PANEL ASSEMBLY~~								

MODEL	NEXT ASSY	MODULE NO.	USED PER MODULE
LEM	LDW 280-25225	LEM-6	1
LEM		LEM-5	1
LEM		LEM-4	1
LEM		LEM-3	1
LEM		LEM-2	1
LEM		LEM-1	1
LEM	LDW 280-25225	LTA-8	1

PART NO. LDW 280-10684-11

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCE UNLESS SPECIFIED
FRACTIONS - DECIMALS - ANGLES
± 1/32   ±.030   ± ½°

DRAWN BY J. KLEIN

GRUMMAN AIRCRAFT ENGRG CORP
BETHPAGE, L.I., N.Y.

SHIELD - ASC. STAGE - M/S ENGINE BAY SHIELD - LH - THERMAL

CONTRACT NO. NAS 9-1100   DOCUMENTATION TYPE II

CODE IDENT NO.	SIZE	
26512	J	LDW 280-10684

SCALE FULL   SHEET

3

NAS 9-1100

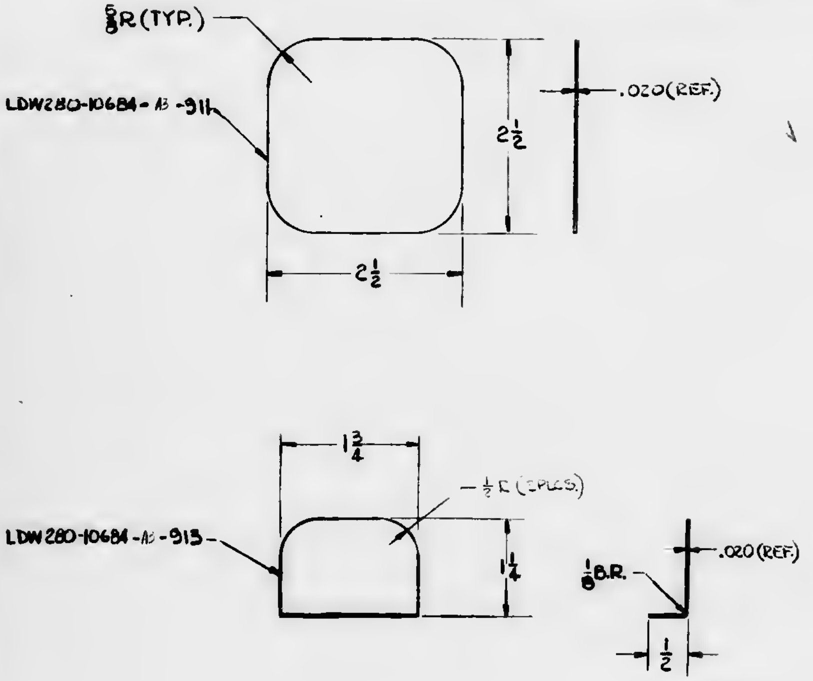
THIS IS ON ORIG DWG

A

GRUMMAN AIRCRAFT ENGINEERING CORP.
CODE IDENT NO. 26512
ENGINEERING ORDER

LDW280-10684 | EO NO. AB
LM-5-11640

RELEASED BY LIAISON



5/8 R (TYP.)
LDW280-10684-AB-911
2 1/2
2 1/2
.020 (REF.)
1 3/4
1/2 R (2 PLCS.)
LDW280-10684-AB-913
1 1/4
1/8 B.R.
.020 (REF.)
1/2

RECORD
EO

MAKE -911 & -913 FROM .020 AL. ALLOY SH.
2024-T3 - QQ-A-250/5 FIN. #38
EFF. QUAL TEST ONLY I&T=E
N/A

LDW280-10684-AB-911 LDW280-28159 1 REQD.
LDW280-10684-AB-913 LDW280-28222 2 REQ'D
LDW280-10684-AB-913 LDW280-28225 2 REQD.

☑

TO COVER UP EXPOSED HOLE

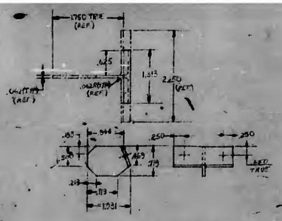
ADDED E.O TO RECORD BLOCK

3
E

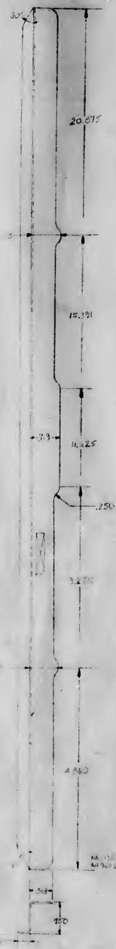
LM QUAL. TEST (70)
✓ NOT REQ'D.
WT 1/16/63
VDI.
1-23-63
C
LDW280 10684
AB

ISSUED BY ____ SECTION ____ GROUP NO. ____

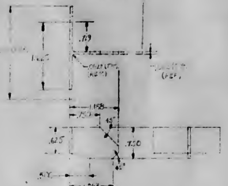
01
NAS 9-1100


1.750 TRUE (REF)
.625
1.313
2.250 (REF)
.062(TYP) (REF)
.062R(TYP) (REF)
.188
.944
.500
.469
.719
.219
.119
1.031
.250
.250
.250 TRUE

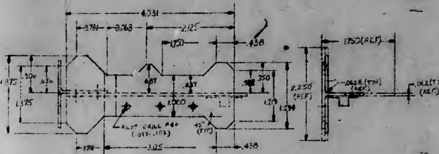
LDW 280-10834-13 SHOWN
LDW 280-10834-14 OPPOSITE

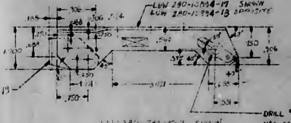

20.875
15.391
.719
11.625
.250R (TYP)
3.250
4.860
.313
.750

LDW 280-10690-15


1.750(REF)
.719
.062R(TYP) (REF)
(REF)
1.188
.750
45°
.625
.750
.500
1.063

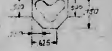
LDW 280-10834-19 SHOWN
LDW 280-10834-20 OPPOSITE


4.031
.3781
3.063
2.125
1.750
.438
1.875
.906
.656
1.375
.687
.437
.750
1.000
1.219
1.594
2.250 (REF)
1.750(REF)
.062R(TYP) (REF)
.062(TYP) (REF)
PILOT DRILL #40 (.097-.102)
45° (TYP)
.3781
3.125
.438

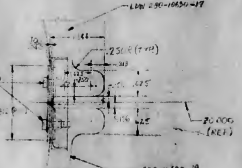

LDW 280-10834-17 SHOWN
LDW 280-10834-18 OPPOSITE
LDW 280-10834-19
.188
.306
.188
.306
.214
.250
.750
1.300
.688
.560
45°
.375
45°
30°
47°
.750
.906
.150
1.031
3.031
.531
.750

LDW 280-28225-11 SHOWN
LDW 280-28225-12 OPPOSITE

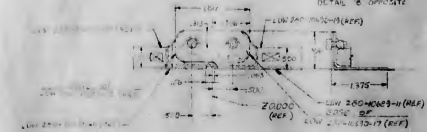
DRILL #19 (.165-.171)
NAS 697-A08(1)
MS 20426AD3
CSK FAR SIDE ON LDW 280-10834-17
NAS 1132 V2 (1)
AN 960-C6L(1)

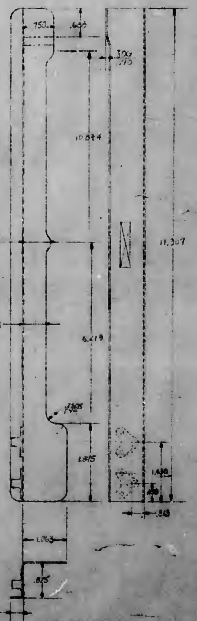

.875
.500
.500
.150
.250
.625

LDW 280-10834-11

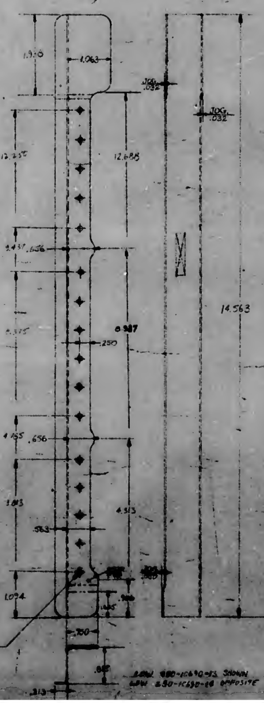

LDW 280-10690-17
1.144
.250R (TYP)
.313
.625
.250
.125
.625
NAS 1132 V (2)
AN 960 C6L(2)
1.812
.116
.625
20.000 (REF)
LDW 280-10690-19

DETAIL A
DETAIL B OPPOSITE

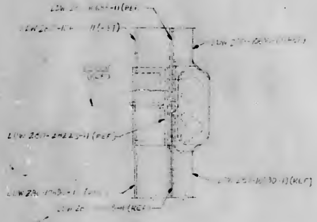

1.812
.313
.156
LDW 280-10690-19(REF)
.500
.906
.156
.063
.500
1.375
.500
20.000 (REF)
LDW 280-10629-11 (REF)
EDGE OF
LDW 280-10690-17 (REF)


.750
.688
.500
.470
10.844
.688
11.307
.563
6.419
.250R
1.875
1.438
.313
1.063
.875
.313

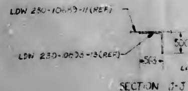
LDW 280-10690-11 SHOWN
LDW 280-10690-12 OPPOSITE
PILOT DRILL #40 (.097-.102)


1.750
1.063
.500
.032
.500
.032
12.250
12.688
2.437
.656
14.563
8.387
.250
5.125
4.125
.656
3.813
.563
4.313
1.094
.750
.875
.313

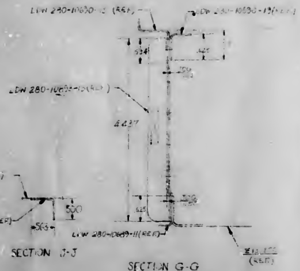
LDW 280-10690-13 SHOWN
LDW 280-10690-14 OPPOSITE


LDW 280-10689-11(REF)
LDW 280-10690-11(REF)
LDW 280-10690-13(REF)
(REF)
LDW 280-28225-11 (REF)
LDW 280-10690-13(REF)
LDW 280-10689-11 (REF)
LDW 280-10690-11(REF)

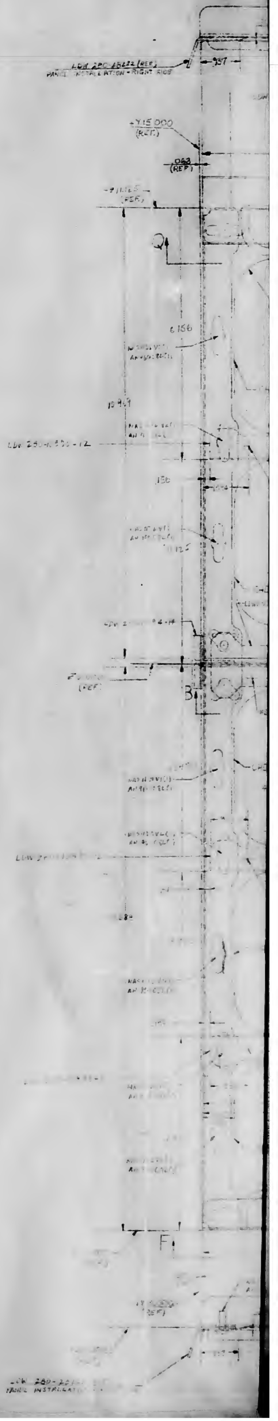
SECTION F-F


LDW 280-10689-11(REF)
LDW 280-10690-13(REF)
.500
.563

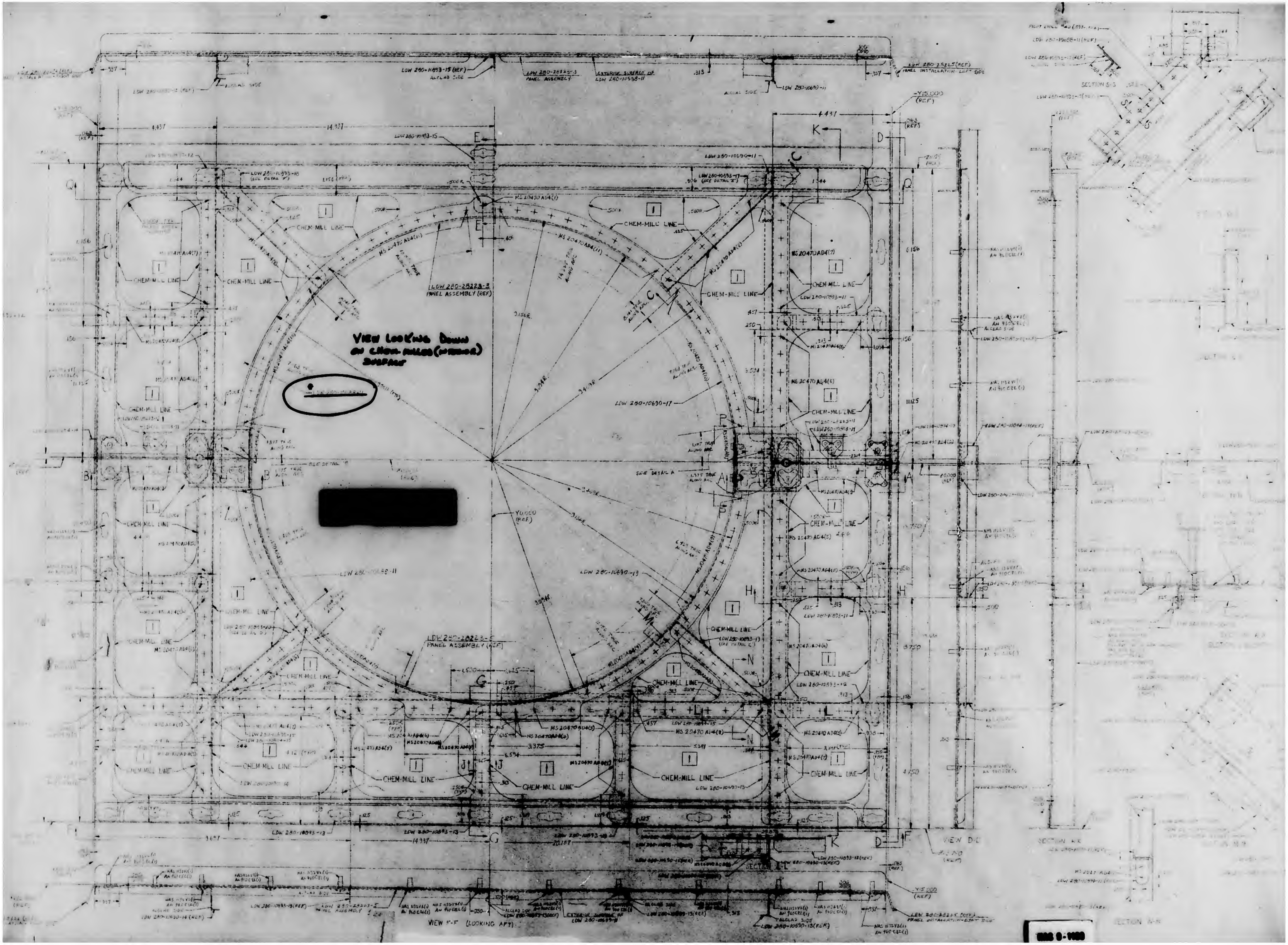
SECTION J-J


LDW 280-10690-12 (REF)
LDW 280-10690-19(REF)
.534
.625
.500
LDW 280-10690-13(REF)
4.437
.625
.500
LDW 280-10689-11(REF)
(REF)

SECTION G-G

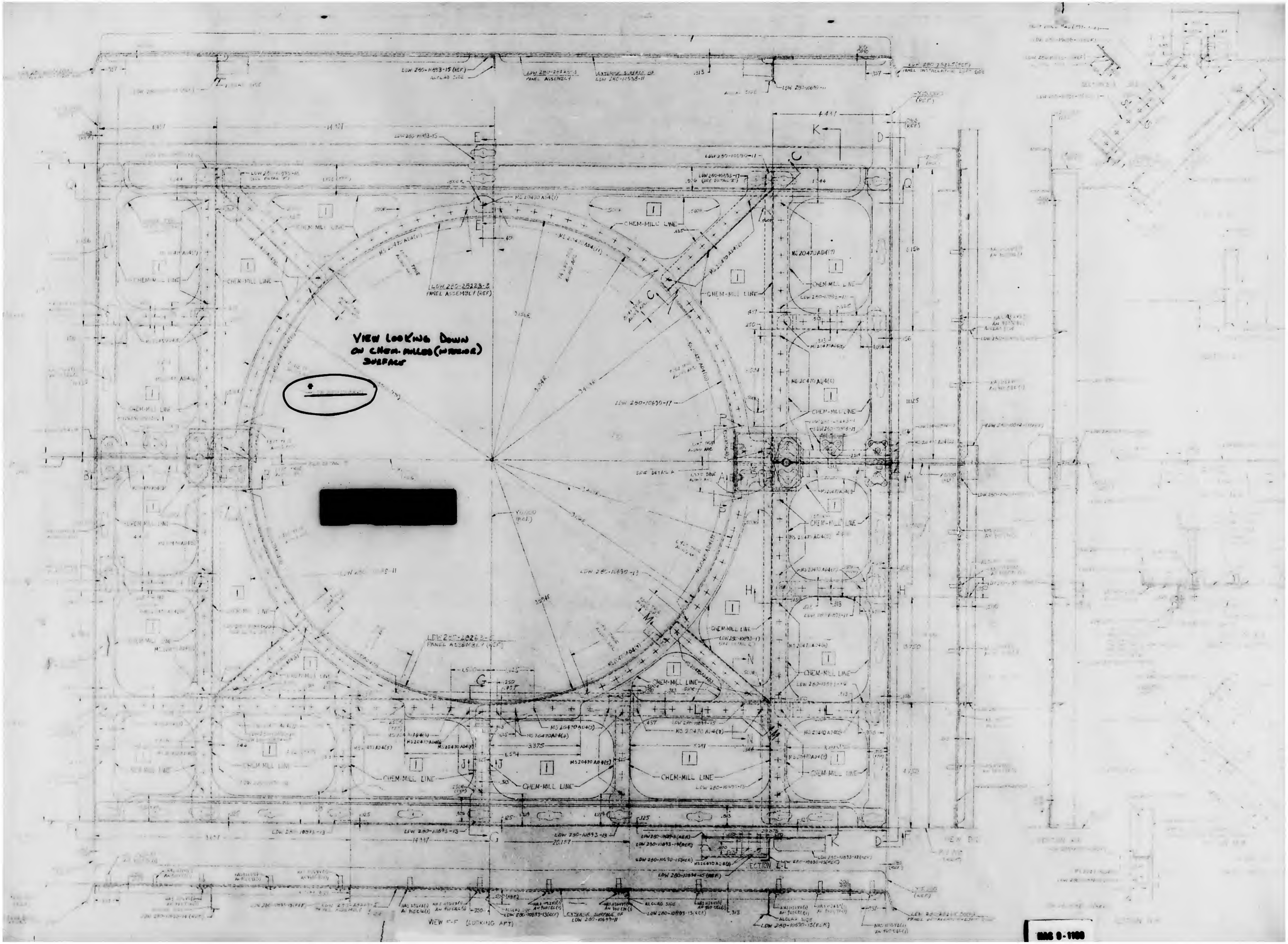

LDW 280-28822(REF)
PANEL INSTALLATION-RIGHT SIDE
.937
+Y15.000 (REF)
.062 (REF)
(REF)
6.156
10.451
LDW 280-10690-12
.156
(REF)
F
(REF)
PANEL INSTALLATION

[redacted]


LDW 280-10893-15 (REF)
ALCLAD SIDE
LDW 280-28223-3
PANEL ASSEMBLY
EXTERIOR SURFACE OF
LDW 280-10558-11
LDW 280-28225 (REF)
PANEL INSTALLATION-LEFT SIDE
LDW 280-10690-11
-Y15.000 (REF)
4.437
14.337
LDW 280-10893-15
E
K
D
C
Q
CHEM-MILL LINE
MS 20470 AD4(7)
LDW 280-28223-3
PANEL ASSEMBLY (REF)
3.158R
3.098R
2.498R
LDW 280-10690-17
P
B
A
SEE DETAIL A
SEE DETAIL B
Y0.000 (REF)
LDW 280-10558-11
LDW 280-10690-19
H
N
LDW 280-28223-5
PANEL ASSEMBLY (REF)
G
J
L
3.375
4.500
1.125
6.156
1.125
3.750
LDW 280-10893-13
LDW 280-10893-15
14.337
20.187
F
VIEW E-E (LOOKING AFT)
LDW 280-28225 (REF)
PANEL INSTALLATION-RIGHT SIDE
-Y15.000 (REF)
SECTION S-S
VIEW D-D
SECTION K-K
SECTION N-N
SECTION M-M

VIEW LOOKING DOWN ON CHEM-MILLED (INTERIOR) SURFACE

[redacted]

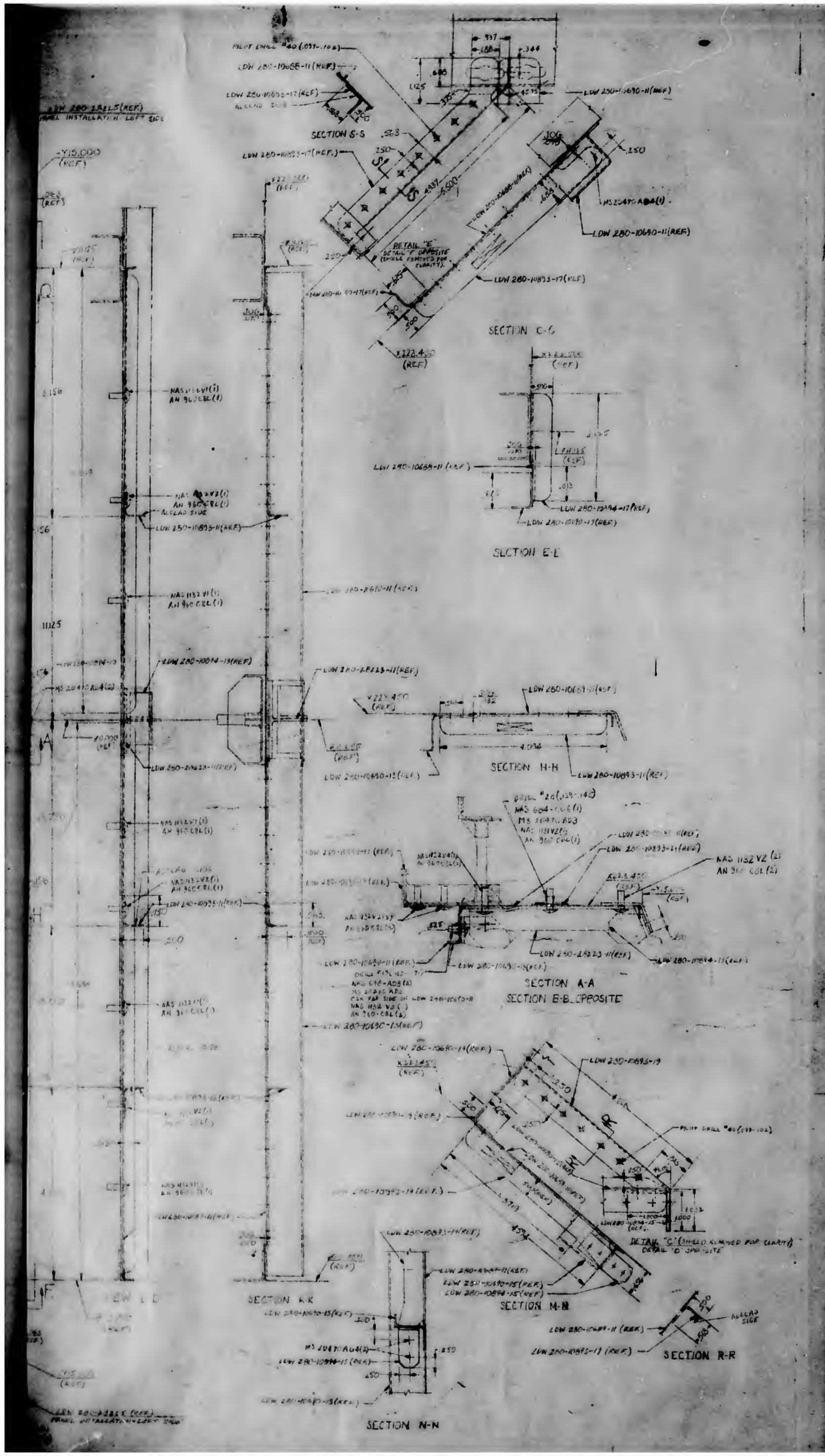


LDW 280-10893-15 (REF)
ALCLAD SIDE
LDW 280-28223-3
PANEL ASSEMBLY
EXTERIOR SURFACE OF
LDW 280-10558-11
PANEL INSTALLATION (REF)
LDW 280-10690-11
LDW 280-28223-2
PANEL ASSEMBLY (REF)
CHEM-MILL LINE
MS 20470 AD4(7)
LDW 280-10690-17
LDW 280-10690-13
LDW 280-28223-2
PANEL ASSEMBLY (REF)
SEE DETAIL A
VIEW E-E (LOOKING AFT)
SECTION L-L
LDW 280-10893-13
E
C
K
D
Q
B
A
P
H
M
N
G
J
L
F

VIEW LOOKING DOWN ON CHEM-MILLED (INTERIOR) SURFACE

[redacted]

MAS 0-1180


SECTION S-S
SECTION C-C
SECTION E-E
SECTION H-H
SECTION A-A
SECTION B-B OPPOSITE
SECTION K-K
SECTION M-M
SECTION N-N
SECTION R-R
VIEW L-L
DETAIL "E"
DETAIL "F" OPPOSITE (SHIELD REMOVED FOR CLARITY)
DETAIL "C" (SHIELD REMOVED FOR CLARITY) DETAIL "D" OPPOSITE
LDW 280-10688-11 (REF)
LDW 280-10690-11 (REF)
LDW 280-10693-17 (REF)
LDW 280-10690-13 (REF)
LDW 280-10693-19
LDW 280-10694-17 (REF)
LDW 280-10694-15 (REF)
LDW 280-28223-11 (REF)
LDW 280-2610-11 (REF)
NAS 1132 V2 (2)
AN 960 C8L (2)
MS 20470 AD4 (1)
PILOT DRILL #40 (.097-.102)
ALCLAD SIDE
Y 15.000 (REF)
X 222.450 (REF)
X 223.450 (REF)
20.000 (REF)
.250
.500
1.125

NOTES:

1. ALL [illegible] BE CONSIDERED [illegible] INFORMATION.
2. BEND RADII SHALL BE AS FOLLOWS:
   .020 THICKNESS BEND RADIUS = 1/16
   [redacted]
3. NO TOOLING HOLES PERMITTED IN PARTS
4. DRAWING MAY BE SCALED FOR DIMENSIONS NOT SHOWN.
5. [redacted]
6. CORNER TRIM RADIUS ON FLAT PATTERN OPTIONAL 1/4 R MAX
7. [redacted]
8. a. MAKE LDW 280-10688-11 [redacted] FROM 2024-T3 ALCLAD BOTH SIDES (SKIN QUALITY). FINISH ALUMALITE 2[illegible] WHICH MAY BE PURCHASED FROM ALUMINUM Co. OF AMERICA ([illegible] 01634)
   b. THE SURFACE DESIGNATED EXTERIOR SHALL BE PROTECTED WITH STRIPPABLE VINYL COATING #786 PURCHASED FROM CARR[illegible] PRODUCTS, INC, FARMINGDALE N.Y.
   c. REMOVE FINISH ALUMALITE 200/R1/E813 (ANODIZE) FROM INTERIOR SURFACE AND REFINISH AS FOLLOWS:
   THE INTERIOR SURFACE TO BE CHEM-MILLED IN ACCORDANCE WITH LSP 14-26100. FINISH ENTIRE SURFACE #75 (LSP 14-9010).

[redacted]

LDW 280-10688-11

CHEM-MILL LINE TOLERANCE ±1/16 WHERE DEPTH OF ETCH IS .090 OR LESS (EXCEPT AS NOTED). ±3/32 WHERE DEPTH OF ETCH IS GREATER THAN .090

SYMBOL	THICKNESS AFTER CHEM-MILLING	DEPTH OF CUT
1	.006 [illegible]	.0[illegible]

PART NO.	DESCRIPTION	MATERIAL	GOVT SPEC	STOCK SIZE	PROCESS SYMBOL
LDW 280-10688-11	SHIELD	SEE NOTE 8	QQ A-362	.020	C [illegible]

TO BE REDRAWN ON A PRODUCTION FORMAT.

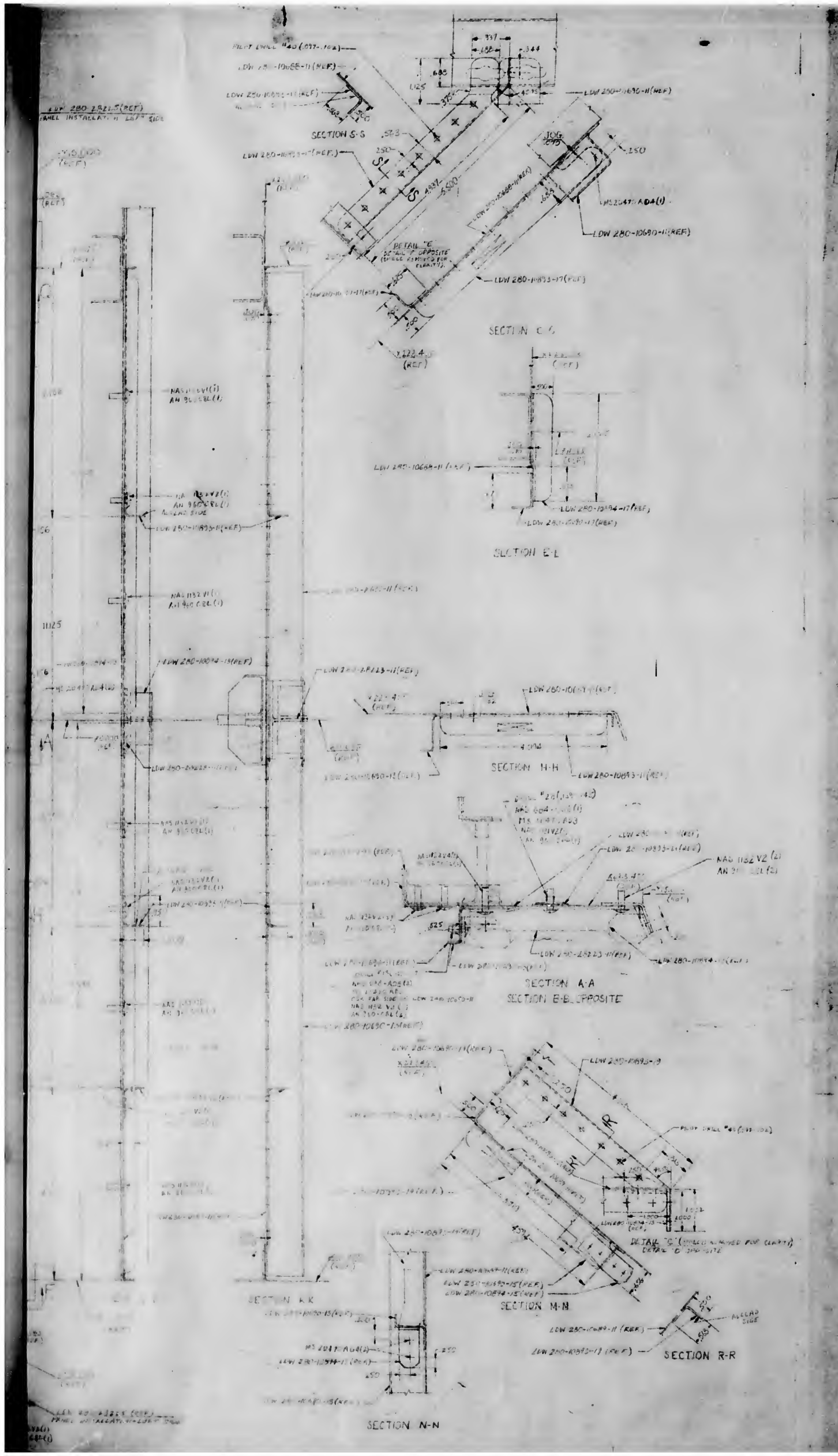
±1/64 ±.030 ±1/2°

GRUMMAN AIRCRAFT ENGRG CORP
BETHPAGE, L.I., N.Y.

SHIELD - [illegible] - 11/8
ENGINE COMPARTMENT ACCESS
NAS 5-1100 TYPE II

26512 J LDW 280-10688

CONTRACT LINE ITEM #1


SECTION S-S
SECTION C-C
SECTION E-E
SECTION H-H
SECTION A-A
SECTION B-B OPPOSITE
SECTION K-K
SECTION M-M
SECTION R-R
SECTION N-N
DETAIL "E"
DETAIL "G"
LDW 280-10688-11 (REF)
LDW 280-28223-11 (REF)
LDW 280-10690-11 (REF)
MS 20470 AD4 (1)
NAS 1132 V2 (2)
AN 310 C8L (2)

CM	CHEM-MILLING	LSP M-26100	

MANUFACTURING OPERATIONS

LDW 280-10688-11

CHEM-MILL LINE TOLERANCE ± 1/16 WHERE DEPTH OF ETCH IS .040 OR LESS (EXCEPT AS NOTED). ± 1/32 WHERE DEPTH OF ETCH IS GREATER THAN .040		
SYMBOL	THICKNESS AFTER CHEM-MILLING	DEPTH OF CUT
1	.006 ± [illegible]	.014 (REF)

NOTES:

1. [illegible] OPERATION.
2. BEND RADII SHALL BE AS FOLLOWS:
   .020 THICKNESS BEND RADIUS = 1/16
   [redacted]
3. NO TOOLING HOLES PERMITTED IN PART.
4. DRAWING MAY BE SCALED FOR DIMENSIONS NOT SHOWN.
5. [redacted]
6. CORNER TRIM RADIUS ON FLAT PATTERN OPTIONAL 1/4 R MAX.
7. [redacted]
8. MAKE LDW 280-10688-11 [redacted] FROM 2024-T3 ALCLAD BOTH SIDES (SKIN QUALITY). FINISH ALUMALITE [illegible] WHICH MAY BE PURCHASED FROM ALUMINUM Co. OF AMERICA [illegible]
   THE SURFACE DESIGNATED EXTERIOR SHALL BE PROTECTED WITH STRIPPABLE VINYL COATING, TO BE PURCHASED FROM [illegible] PRODUCTS INC. FARMINGDALE, N.Y.
   REMOVE FINISH ALUMALITE 200/R1/5810 (ANODIZE) FROM INTERIOR SURFACE AND REFINISH AS FOLLOWS:
   THE INTERIOR SURFACE TO BE CHEM-MILLED IN ACCORDANCE WITH LSP 14-26100. FINISH ENTIRE SURFACE #75 (LSP 4-4010).
9. [redacted]

	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	MATERIAL	GOVT SPEC	COML SPEC	STOCK SIZE (EA)	PROCESS SYMBOL	FINISH NO.	UNIT WT	ZONE
	~~LDW 280-10910-12~~	~~SUPPORT~~								
	LDW 280-10688-11	SHIELD	See Note 8	QQ-A-362		.020	CM [illegible]			

LEM	[redacted]	LEM-2 (33)	1
LEM	[redacted]	LEM-1 (31)	1
LEM	LDW 280-28223	LTA-8 (18)	1

PART NO. LDW 280-10688-11

To Be Redrawn on a Production Format. 3

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCE UNLESS SPECIFIED FRACTIONS - DECIMALS - ANGLES
± 1/32 ±.030 ± 1/2°

DRAWN BY I. KLEIN
LAYOUT BY A. PNOTO
GROUP LEADER
DES. WT.
STRUCTURES
STRUCTURES
WEIGHTS
PROJ ENGR

GRUMMAN AIRCRAFT ENGRG CORP
BETHPAGE, L. I., N.Y.

SHIELD - ASCENT STAGE - M/S
ENGINE COMPARTMENT ACCESS

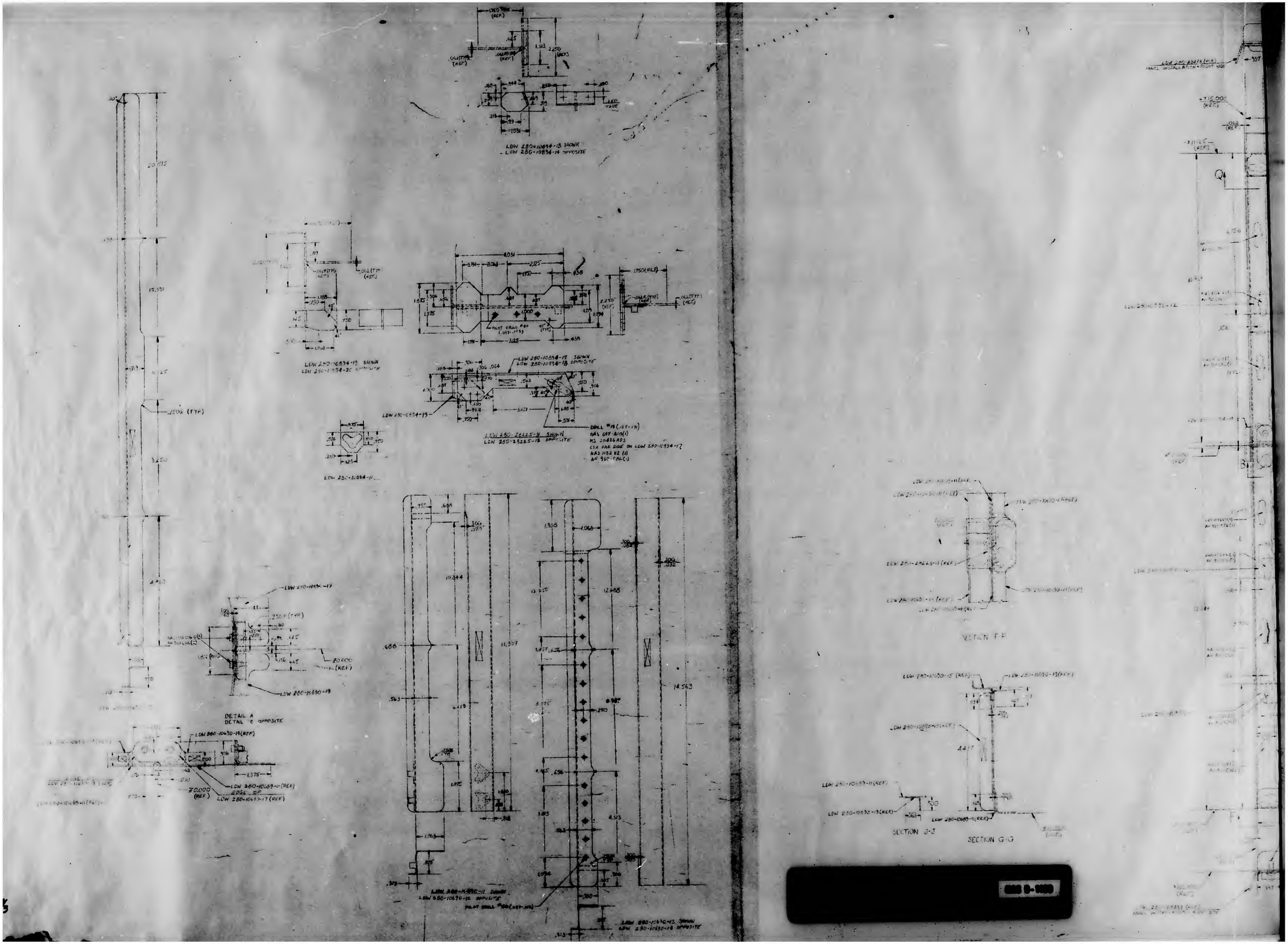
CONTRACT NO. NAS 9-1100 DOCUMENTATION TYPE 3

CODE IDENT NO. 26512 SIZE J LDW 280-10688

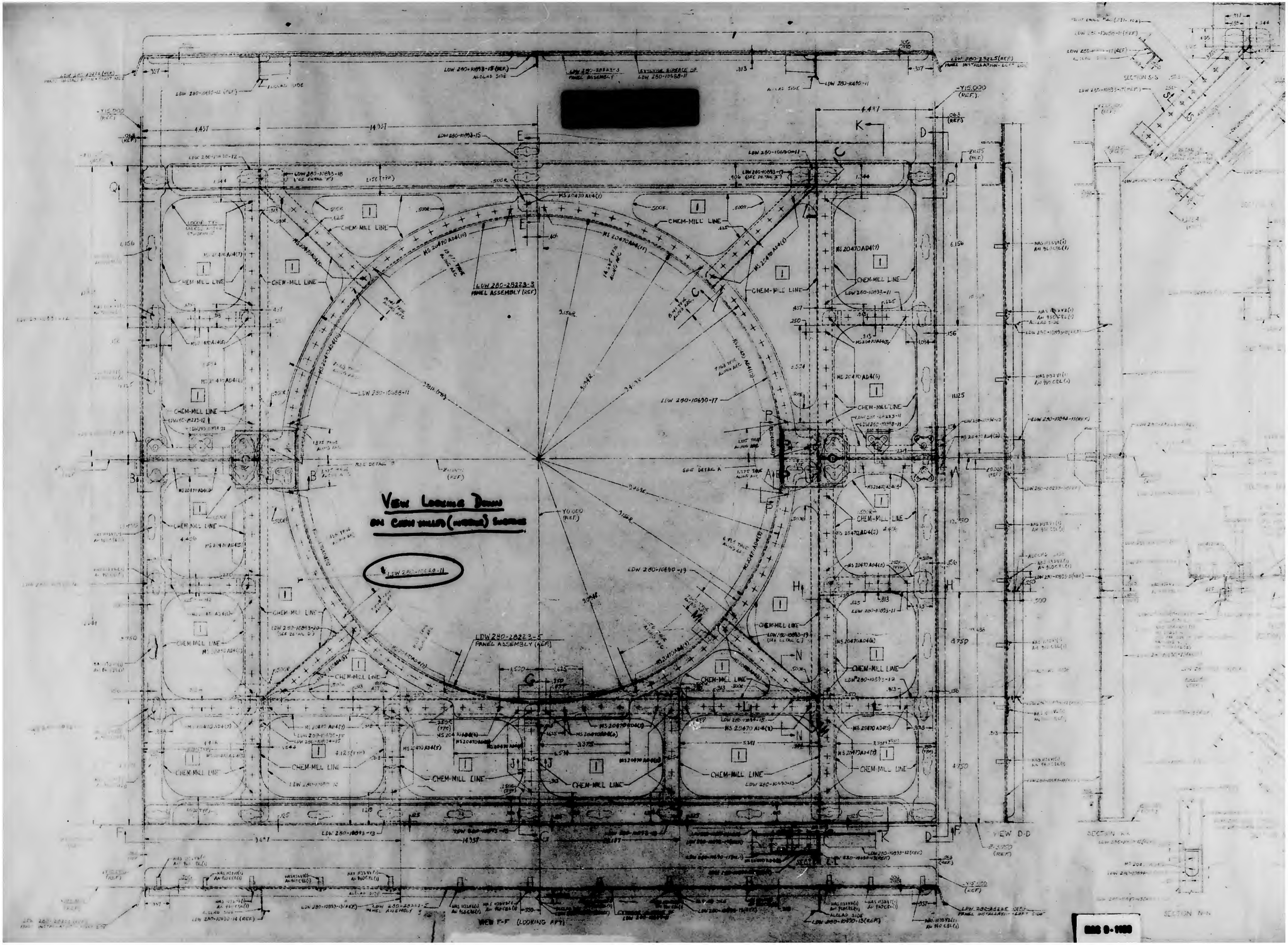
SCALE FULL CONTRACT LINE ITEM #1 SHEET

NAS 9-1100

THIS IS AN ORIG DWG

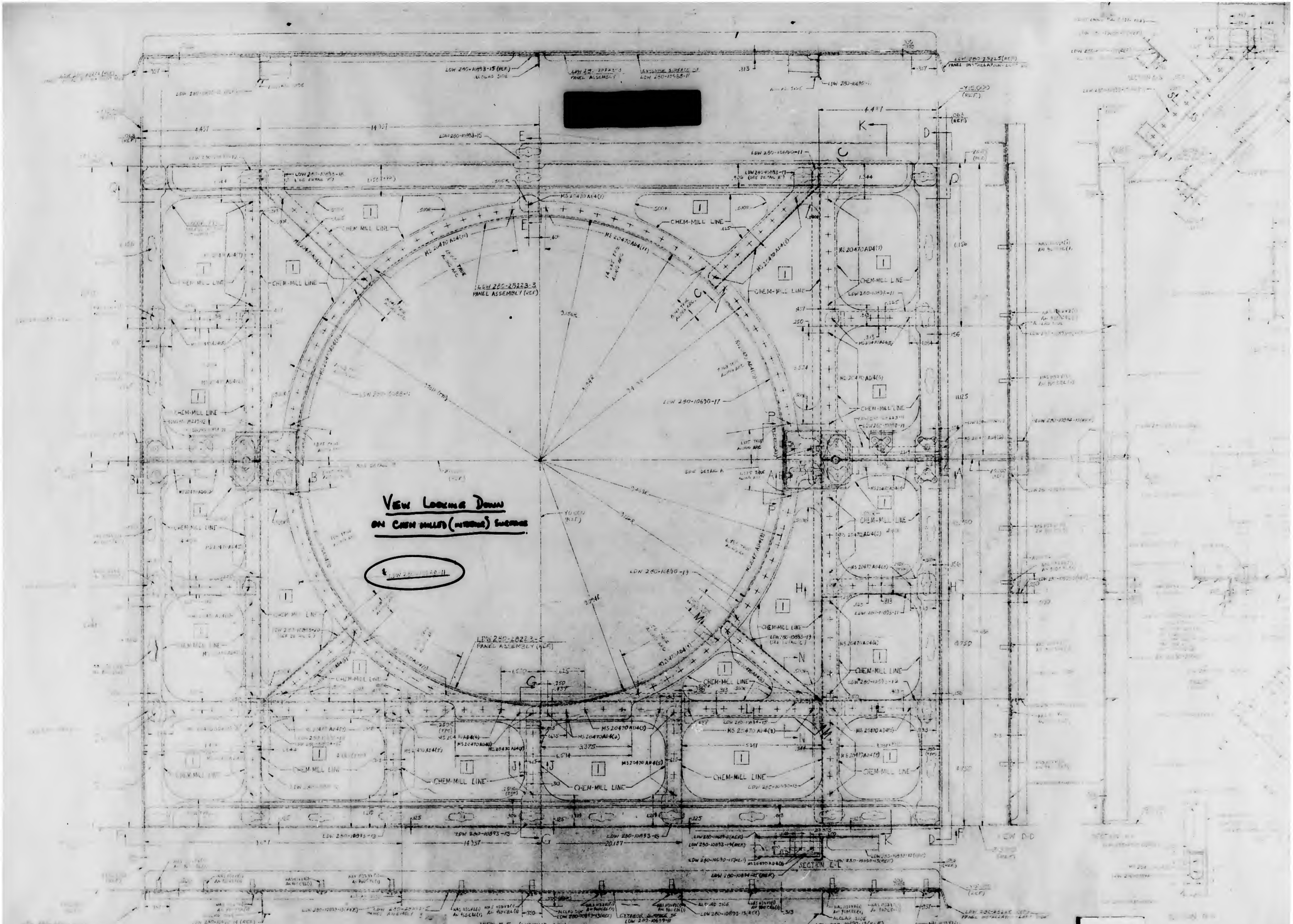

LDW 280-10894-13 SHOWN
LDW 280-10894-14 OPPOSITE
LDW 280-10894-17 SHOWN
LDW 280-10894-18 OPPOSITE
LDW 280-10894-19
PILOT DRILL #40 (.097-.102)
45° (TYP)
2.250 (REF)
1.750 (REF)
.062 R (TYP) (REF)
.062 (TYP) (REF)
LDW 280-10894-11
LDW 280-28225-11 SHOWN
LDW 280-28225-12 OPPOSITE
DRILL #19 (.165-.171)
NAS 647-A03(1)
MS 20426 AD3
CSK FAR SIDE ON LDW 280-10894-17
NAS 1132 V2 (1)
AN 960-C8L(1)
.250 R (TYP)
LDW 280-10894-17
LDW 280-10690-19
Z0.000 (REF)
DETAIL A
DETAIL C OPPOSITE
LDW 280-10690-19(REF)
LDW 280-10689-11 (REF)
EDGE OF
LDW 280-10690-17 (REF)
1.375
LDW 280-10690-11 SHOWN
LDW 280-10690-12 OPPOSITE
PILOT DRILL #40 (.097-.102)
LDW 280-10690-13 SHOWN
LDW 280-10690-14 OPPOSITE
14.563
12.688
11.397
10.844
LDW 280-28222 (REF)
PANEL INSTALLATION - RIGHT SIDE
.337
+Y15.000 (REF)
.062 (REF)
Q
LDW 280-10690-11(REF)
LDW 280-28225-11 (REF)
SECTION F-F
LDW 280-10690-15 (REF)
LDW 280-10690-13(REF)
LDW 280-10688-13(REF)
4.437
LDW 280-10689-11(REF)
LDW 280-10590-13(REF)
.500
.563
SECTION J-J
SECTION G-G

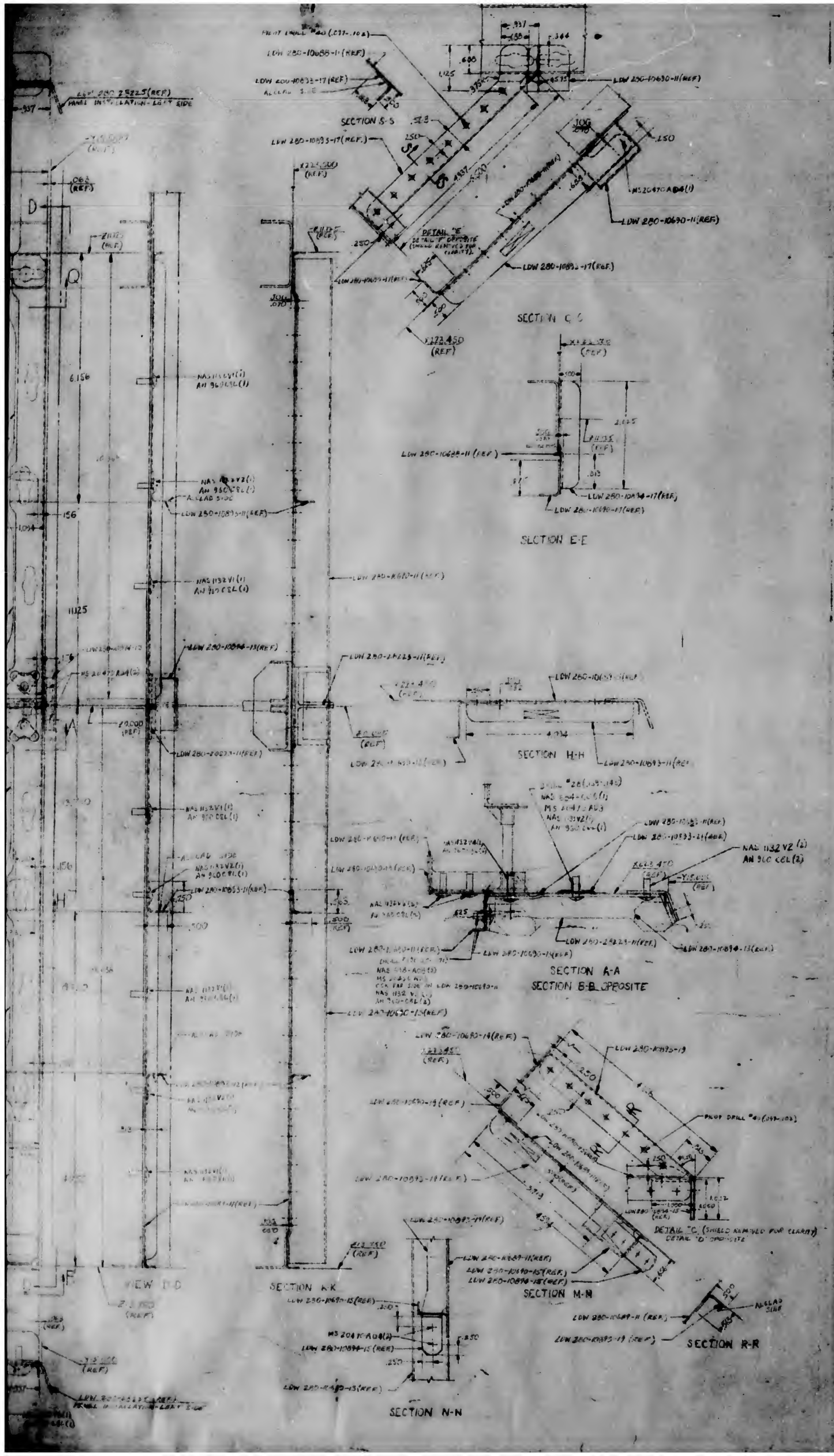
[redacted]



View Looking Down
on Chem Milled (Inside) Surface
LDW 280-10660-11
LDW 280-28223-3
PANEL ASSEMBLY (REF)
LDW 280-28223-5
PANEL ASSEMBLY (REF)
LDW 280-10688-11
LDW 280-10690-17
LDW 280-10690-19
LDW 280-10693-15
LDW 280-10693-11
LDW 280-10693-12
LDW 280-10693-13
LDW 280-10693-18
LDW 280-10690-11
LDW 280-10690-13
LDW 280-28225 (REF)
PANEL INSTALLATION - LEFT SIDE
EXTERIOR SURFACE OF LDW 280-10688-11
ALCLAD SIDE
CHEM-MILL LINE
MS 20470 AD4
NAS 1153V
AN 960 C6L
SEE DETAIL A
SEE DETAIL B
Y15.000 (REF)
-Y15.000 (REF)
Y0.000 (REF)
Z0.000 (REF)
3.156 R
14.337
4.437
.500R
.313
.344
1.125
4.750
3.750
VIEW D-D
VIEW F-F (LOOKING AFT)
SECTION E-E
SECTION K-K
SECTION S-S
SECTION N-N
A
B
C
D
E
F
G
H
J
K
L
M
N
P
Q
NAS 9-1100

[redacted]


VIEW LOOKING DOWN
ON CHEM-MILLED (INTERIOR) SURFACE
LDW 280-28223-3
PANEL ASSEMBLY (REF)
LDW 280-28223-5
PANEL ASSEMBLY (REF)
LDW 280-10690-17
LDW 280-10690-19
LDW 280-10690-11
LDW 280-10893-15 (REF)
ALCLAD SIDE
EXTERIOR SURFACE OF LDW 280-10688-11
CHEM-MILL LINE
MS 20470 AD4
VIEW F-F (LOOKING AFT)
SECTION L-L
VIEW D-D
SECTION G-G
14.257
20.127
4.437
A
B
C
D
E
F
G
H
J
K
L
M
N
P


SECTION S-S
LDW 280-10688-1 (REF)
LDW 280-10690-11 (REF)
LDW 280-10693-17 (REF)
MS 20470 AD6 (1)
DETAIL "E"
LDW 280-10693-17 (REF)
SECTION G-G
SECTION E-E
LDW 280-10688-11 (REF)
SECTION H-H
LDW 280-10693-11 (REF)
SECTION A-A
SECTION B-B OPPOSITE
NAS 1132 V2 (2)
AN 960 C6L (2)
DETAIL "C" (SHIELD REMOVED FOR CLARITY)
DETAIL "D" OPPOSITE
SECTION M-N
SECTION R-R
SECTION N-N
SECTION K-K
VIEW D-D
LDW 280-10690-19 (REF)
PILOT DRILL

NOTES:

1. A[illegible] REFERENCE [illegible] NOT APPLICABLE TO LDW 280-[illegible] SHALL BE CONTROLLED REFERENCE [illegible] 1.
2. BEND RADII SHALL BE AS FOLLOWS:
   .020 THICKNESS, BEND RADIUS = 1/16
   ~~[illegible]~~
   ~~[illegible]~~
3. NO TOOLING HOLES PERMITTED IN PARTS
4. DRAWING MAY BE SCALED FOR DIMENSIONS NOT SHOWN
5. ~~[illegible]~~
6. CORNER TRIM RADIUS ON FLAT PATTERN OPTIONAL 1/4 R MAX.
7. ~~[illegible]~~
8. a. MAKE ~~[illegible]~~ LDW 280-10689-11 FROM 2024-T3 ALCLAD BOTH SIDES (SKIN QUALITY). FINISH ALUMALITE 200/R1/E810 WHICH MAY BE PURCHASED FROM ALUMINUM CO. OF AMERICA (CODE IDENT 01654)
   b. THE SURFACE DESIGNATED EXTERIOR SHALL BE PROTECTED WITH STRIPPABLE VINYL COATING #796 PURCHASED FROM CARROLL PRODUCTS, INC., FARMINGDALE N.Y.
   c. REMOVE FINISH ALUMALITE 200/R1/E810 (ANODIZE) FROM INTERIOR SURFACE AND REFINISH AS FOLLOWS:
      THE INTERIOR SURFACE TO BE CHEM-MILLED IN ACCORDANCE WITH LSP 14-26100 FINISH ENTIRE SURFACE F7 (LSP 14-4010)

~~[illegible]~~

LDW 280-10689-11

CHEM-MILL [illegible] TOLERANCE [illegible] DEPTH OF ETCH IS .0[illegible] [illegible] [illegible] DEPTH OF ETCH IS [illegible]

SYMBOL	THICKNESS AFTER CHEM-MILLING	DEPTH OF CUT
1	.006± [illegible]	.0[illegible]

LDW 280-10689-11	SHIELD	SEE NOTE 8	QQ-A-362				CM + NOTE	

[illegible]	[illegible]	[illegible]	MATERIAL	GOVT SPEC	COML SPEC	STOCK SIZE (EA)	[illegible]	FINISH	UNIT WT	ZONE

To Be Redrawn on a Production Format.

3

± 1/64 ±.030 ± 1/2°

STRUCTURES
STRUCTURES
WEIGHTS
PROJ. ENGR

GRUMMAN AIRCRAFT ENGRG CORP
BETHPAGE, L.I., N.Y.

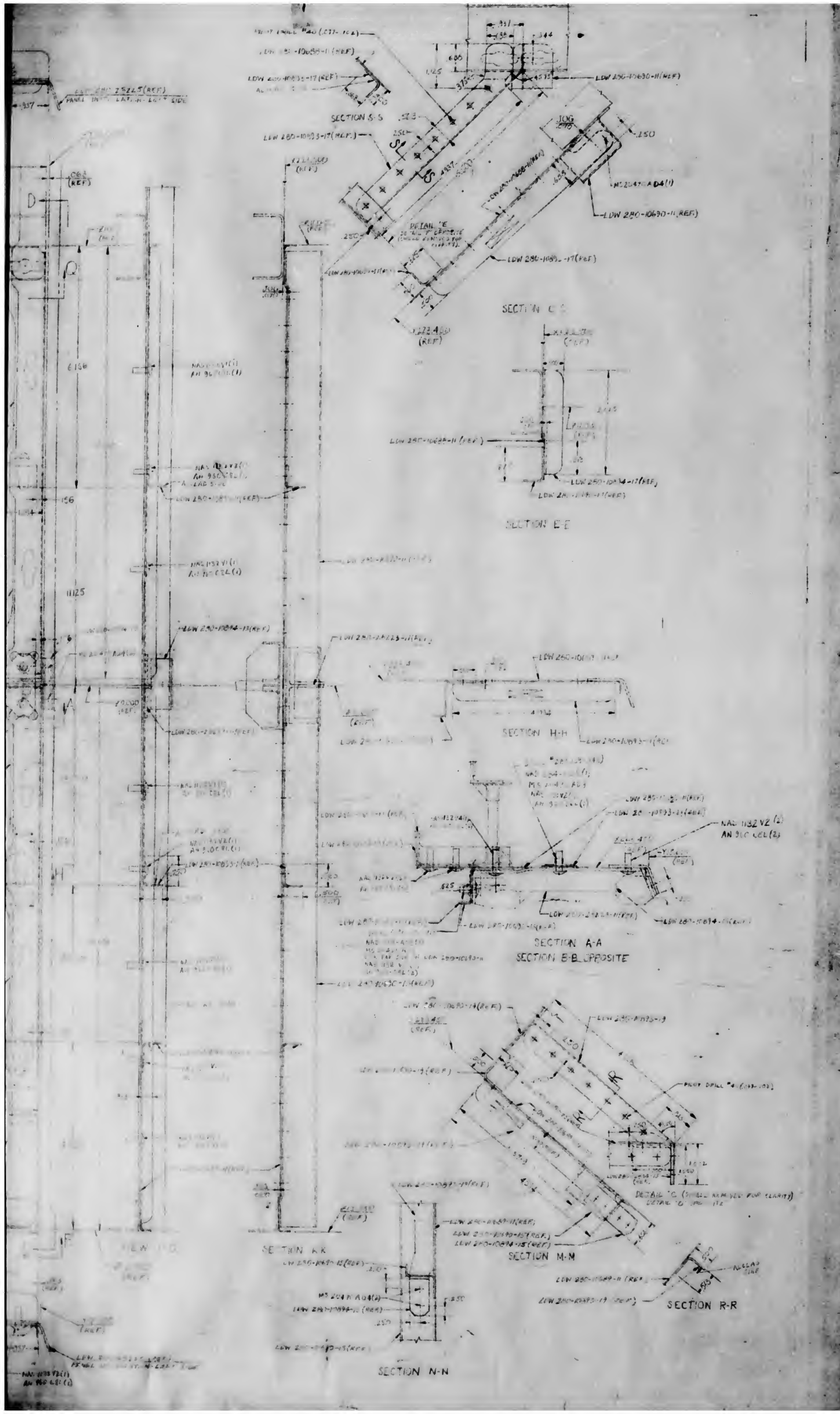
[illegible] - ENGINE COMPARTMENT ACCE[illegible]

CONTRACT NO. NAS 9-1100 DOCUMENTATION TYPE II

26512 | J | LDW 280-10689

SCALE FULL | CONTRACT [illegible]

DWG. SIZE 34 X


SECTION S-S
SECTION C-C
SECTION E-E
SECTION H-H
SECTION A-A
SECTION B-B OPPOSITE
DETAIL "E"
DETAIL "G" (SHIELD REMOVED FOR CLARITY)
SECTION K-K
SECTION M-M
SECTION N-N
SECTION R-R
VIEW
LDW 280-10690-11 (REF)
LDW 280-10693-17 (REF)
LDW 280-10689-11 (REF)
LDW 280-10690-11 (REF)
LDW 280-10694-17 (REF)
LDW 280-10693-11 (REF)
LDW 280-23223-11 (REF)
NAS 1132 V2 (1)
AN 960 C 6 L (2)
MS 20470 AD 4 (1)
.150
.150
.250
.344
.625
1.125
1.56
6.156

CM	CHEM-MILLING	LSP 14-2/100	

LDW 280-10689-11

CHEM-MILL LINE TOLERANCE ±1/16 WHERE DEPTH OF ETCH IS .090 OR LESS (EXCEPT AS NOTED). ±1/32 WHERE DEPTH OF ETCH IS GREATER THAN .090

SYMBOL	THICKNESS AFTER CHEM-MILLING	DEPTH OF CUT
1	.006 ± [illegible]	.014 (REF.)

NOTES:

1. [illegible]
2. BEND RADII SHALL BE AS FOLLOWS:
   .020 THICKNESS, BEND RADIUS = 1/16
3. NO TOOLING HOLES PERMITTED IN PARTS
4. DRAWING MAY BE SCALED FOR DIMENSIONS NOT SHOWN
6. CORNER TRIM RADII ON FLAT PATTERN OPTIONAL 1/4 R MAX.
7. ~~1/4 EDGE DISTANCE FOR ALL~~ [illegible]
8. a. MAKE LDW 280-10689-11 FROM 2024-T3 ALCLAD BOTH SIDES (SKIN QUALITY) FINISH ALUMALITE [illegible] WHICH MAY BE PURCHASED FROM [illegible] AMERICAN [illegible]
   b. THE SURFACE DESIGNATED EXTERNAL SHALL BE PROTECTED WITH STRIP-ABLE VINYL COATING #[illegible] PURCHASED FROM [illegible] PRODUCTS INC, FARMINGDALE N.Y.
   c. REMOVE FINISH ALUMALITE [illegible] (ANODIZE) FROM INTERIOR SURFACE AND REFINISH AS FOLLOWS:
      THE INTERIOR SURFACE TO BE CHEM-MILLED IN ACCORDANCE WITH LSP 14-2[illegible] FINISH ENTIRE SURFACE [illegible] 4-9[illegible])

QTY REQD PER ASSY	PART OR IDENTIFYING NO.	I&T	CODE IDENT	NOMENCLATURE OR DESCRIPTION	MATERIAL
	LDW 280-10689-11			SHIELD	SEE NOTE

MODEL	NEXT ASSY	MODULE NO.	REQD PER MODULE
LEM		LEM-2 (32)	1
LEM		LEM-1 (31)	1
LEM	LDW 280-23223	LTA-8 (18)	1

PART NO. LDW 280-10689-11

To Be Redrawn on a Production Format

3

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCE UNLESS SPECIFIED FRACTIONS - DECIMALS - ANGLES ±1/32 ±.03 ±1/2°

DRAWN BY S. KLEIN

GRUMMAN AIRCRAFT ENGRG CORP
BETHPAGE, L.I., N.Y.

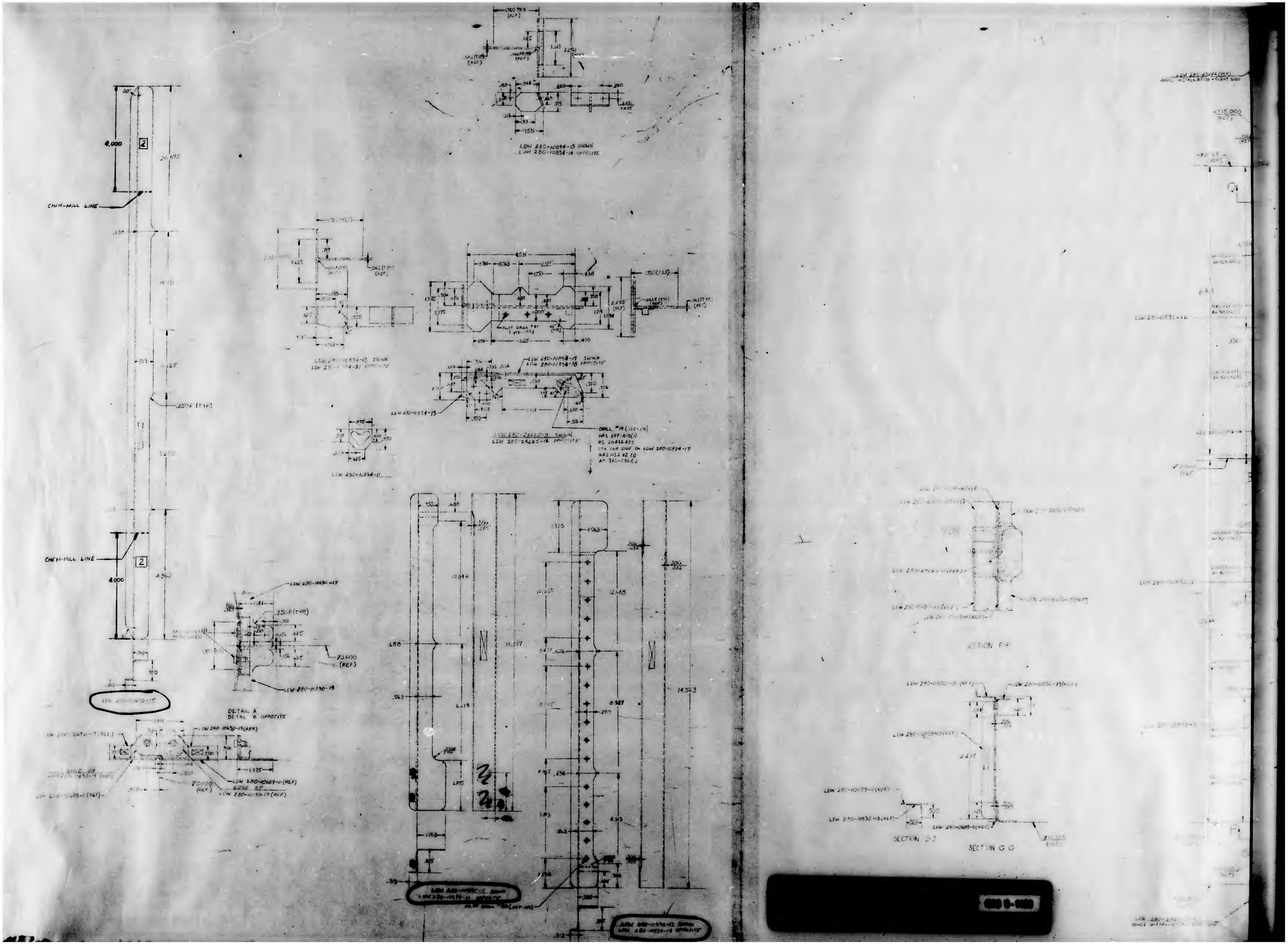
SHIELD - ASCENT STAGE - [illegible]
ENGINE COMPARTMENT AREA

CONTRACT NO. NAS 9-1100 DOCUMENTATION TYPE

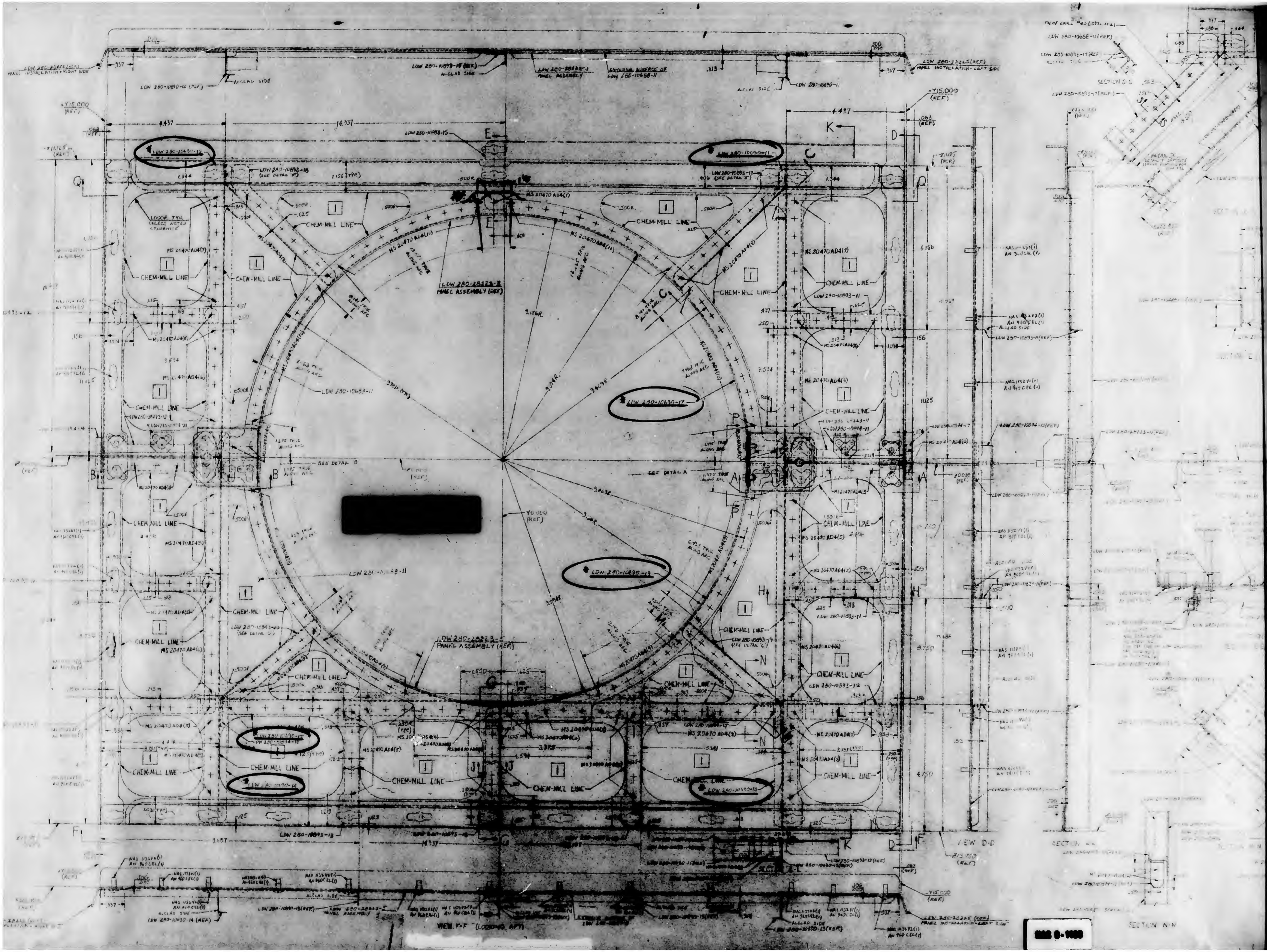
CODE IDENT NO.	SIZE	
26512	J	LDW 280-10689

SCALE FULL SHEET 1

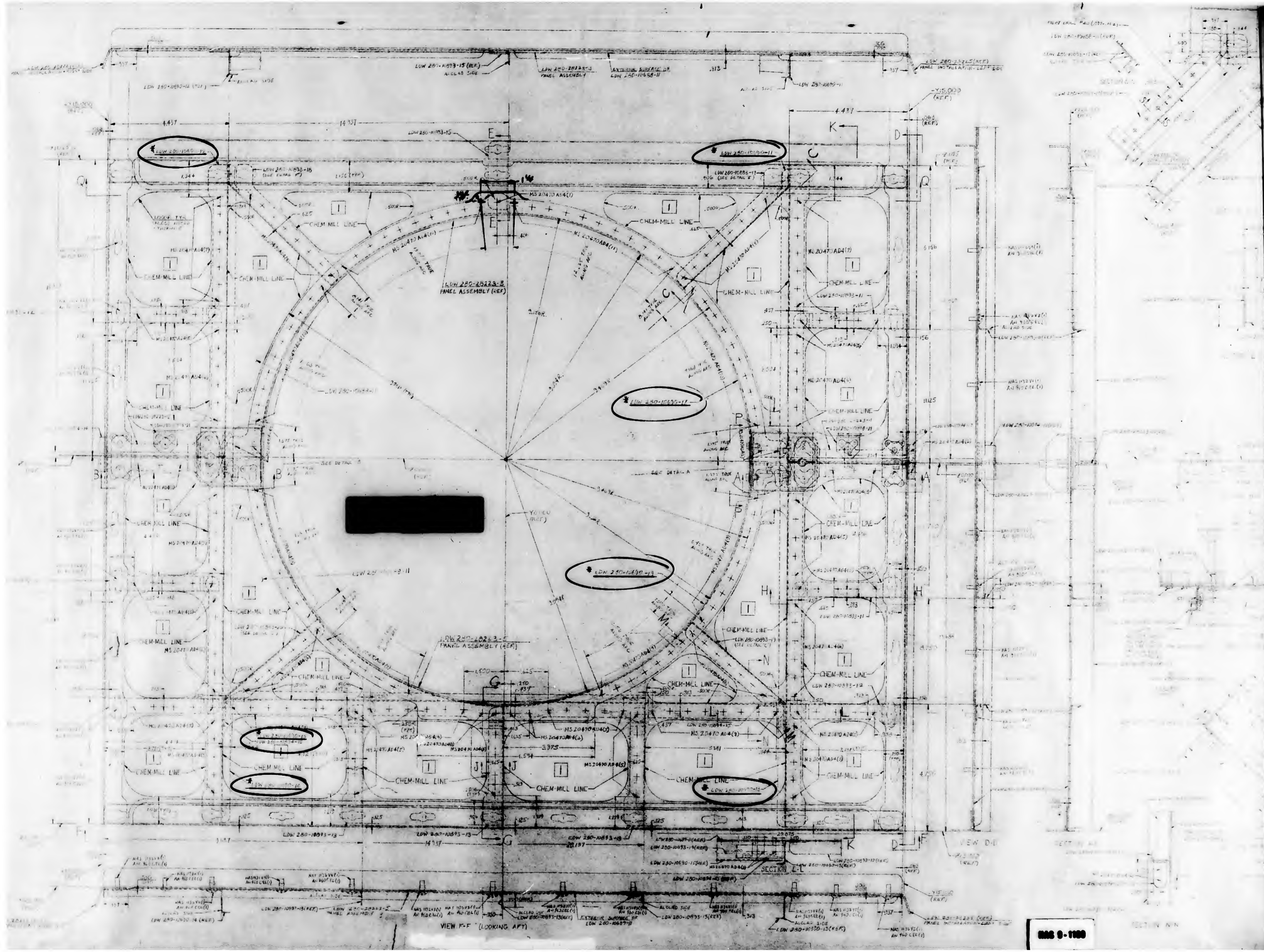
NAS 9-1100


LDW 280-10834-13 SHOWN
LDW 280-10834-14 OPPOSITE
CHEM-MILL LINE
4.000
2
20.675
.250R (TYP)
CHEM-MILL LINE
4.000
2
LDW 280-10690-15
LDW 280-10834-19 SHOWN
LDW 280-10834-20 OPPOSITE
4.031
2.125
.438
1.750 (REF)
.062 (TYP) (REF)
2.250 (REF)
PILOT DRILL #40 (.093-.102)
45° (TYP)
3.125
LDW 280-10834-17 SHOWN
LDW 280-10834-18 OPPOSITE
LDW 280-10834-19
LDW 280-28225-11 SHOWN
LDW 280-28225-12 OPPOSITE
DRILL #19 (.165-.171)
NAS 697-A08 (1)
MS 20426AD3
CSK FAR SIDE ON LDW 280-10834-17
NAS 1152 V2 (1)
AN 960-C8L (1)
LDW 280-10834-11
LDW 280-10834-17
.250R (TYP)
Z0.000 (REF)
LDW 280-10690-19
DETAIL A
DETAIL B OPPOSITE
LDW 280-10690-17 (REF)
LDW 280-10690-19 (REF)
1.375
EDGE OF LDW 280-10690-19 (REF)
LDW 280-10688-11 (REF)
Z0.000 (REF)
LDW 280-10689-11 (REF)
EDGE OF LDW 280-10690-17 (REF)
10.894
11.257
12.685
14.563
LDW 280-10690-11 SHOWN
LDW 280-10690-12 OPPOSITE
PILOT DRILL #40 (.093-.102)
LDW 280-10690-13 SHOWN
LDW 280-10690-14 OPPOSITE
SECTION F-F
LDW 280-10690-15 (REF)
LDW 280-10690-13 (REF)
LDW 280-10833-13 (REF)
LDW 280-10689-11 (REF)
LDW 280-10833-13 (REF)
LDW 280-10689-11 (REF)
SECTION J-J
SECTION G-G
LDW 280-23022 (REF)
PANEL INSTALLATION - RIGHT SIDE
Y15.000 (REF)
LDW 280-10833-12

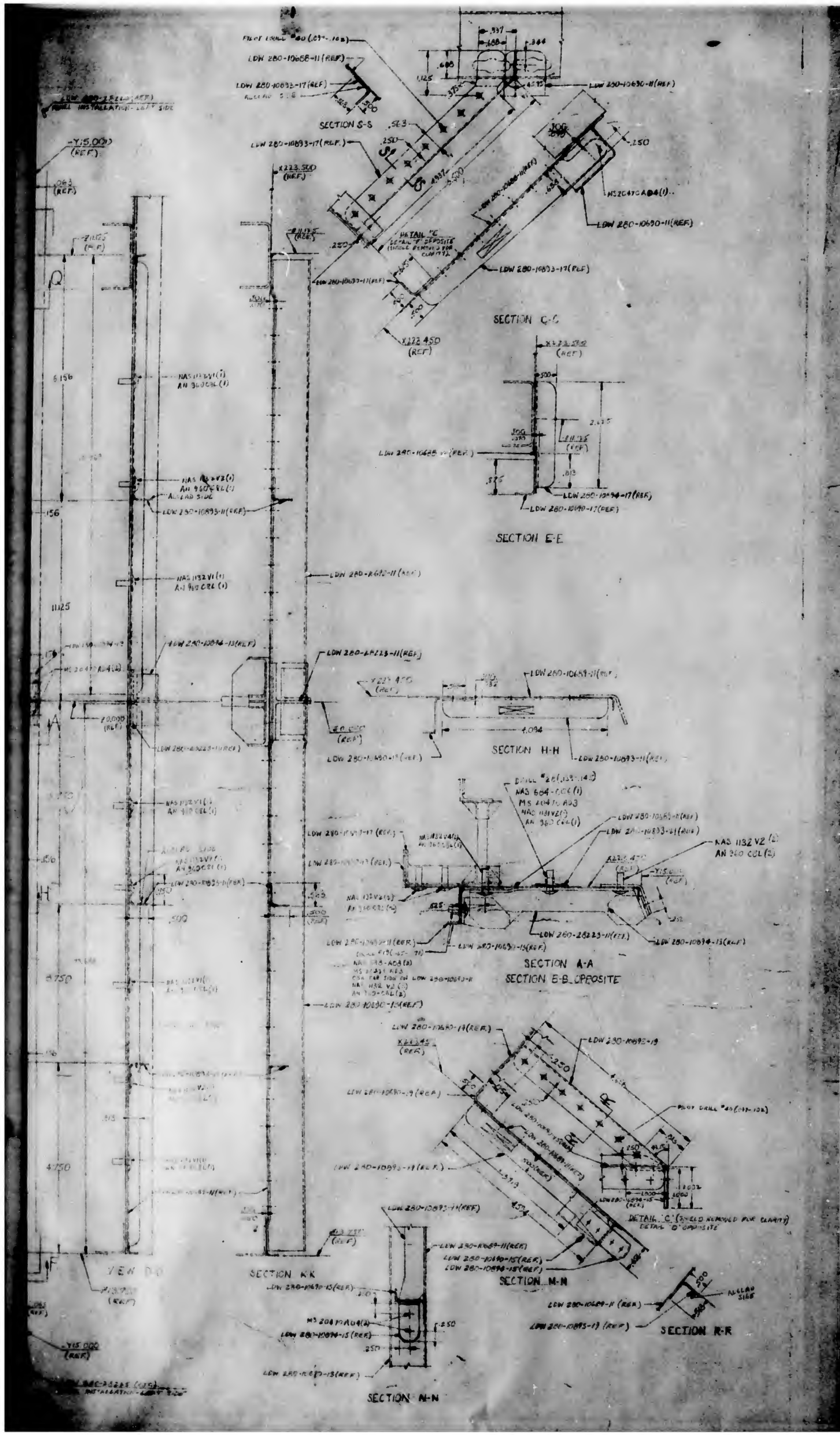
[redacted]


LDW 280-10690-12
LDW 280-10690-11
LDW 280-10690-17
LDW 280-10690-19
LDW 280-10690-15
LDW 280-10690-16
LDW 280-10690-18
LDW 280-28223-3 PANEL ASSEMBLY (REF)
LDW 280-28223-5 PANEL ASSEMBLY (REF)
LDW 280-10688-11
LDW 280-10693-11
LDW 280-10693-12
LDW 280-10693-13
LDW 280-10693-15
LDW 280-10693-18
LDW 280-10693-19
LDW 280-10698-11
CHEM-MILL LINE
MS 20470 AD4
NAS 1132V
AN 960C
ALCLAD SIDE
SEE DETAIL A
SEE DETAIL B
+Y15.000 (REF)
-Y15.000 (REF)
Y0.000 (REF)
4.437
14.337
1.344
3.375
3.524
11.125
6.156
8.750
4.750
3.181
3.906R
3.941R
2.156R
.500R
.625
.313
.250
1.156 (TYP)
A
B
C
D
E
F
G
H
J
K
M
N
P
Q
VIEW D-D
VIEW F-F (LOOKING AFT)
SECTION K-K
SECTION S-S
SECTION N-N
PANEL INSTALLATION - RIGHT SIDE
PANEL INSTALLATION - LEFT SIDE

[redacted]


LDW 280-10890-11
LDW 280-10890-11
LDW 280-10893-18
LDW 280-10893-15
LDW 280-28223-3 PANEL ASSEMBLY
LDW 280-28223-3 PANEL ASSEMBLY (REF)
LDW 280-10890-17
LDW 280-10890-13
LDW 280-10890-16
LDW 280-28223-C PANEL ASSEMBLY (REF)
LDW 280-10893-11
LDW 280-10893-13
LDW 280-10893-15
LDW 280-10893-19
CHEM-MILL LINE
MS 20470 AD4
ALCLAD SIDE
EXTERIOR SURFACE OF LDW 280-10658-11
SEE DETAIL A
SEE DETAIL B
SECTION L-L
VIEW D-D
SECTION A-A
SECTION N-N
VIEW F-F (LOOKING AFT)
4.437
14.437
1.344
1.500
.625
3.375
1.594
20.187
29.875
-Y15.000 (REF)
A
B
C
D
E
F
G
H
J
K
L
M
N
P
Q
[redacted]

NAS 9-1100


SECTION S-S
SECTION C-C
SECTION E-E
SECTION H-H
SECTION A-A
SECTION B-B OPPOSITE
SECTION M-M
SECTION R-R
SECTION N-N
SECTION K-K
VIEW D-D
DETAIL 'C' (SHIELD REMOVED FOR CLARITY) DETAIL 'D' OPPOSITE
DETAIL 'E' DETAIL 'F' OPPOSITE (SHIELD REMOVED FOR CLARITY)
LDW 280-10688-11 (REF)
LDW 280-10693-17 (REF)
LDW 280-10690-11 (REF)
LDW 280-10893-17 (REF.)
LDW 280-10893-11 (REF)
LDW 280-28223-11 (REF)
LDW 280-10694-13 (REF)
LDW 280-10690-13 (REF)
LDW 280-10690-15 (REF)
LDW 280-10690-19 (REF)
LDW 280-10895-19
MS 20470 AD4 (1)
NAS 1132 V1 (1)
AN 960 C8L (1)
NAS 1132 V2 (2)
AN 960 C8L (2)
NAS 604-COC (1)
PILOT DRILL #40 (.097-.102)
X 223.500 (REF)
X 223.450 (REF)
X 222.450 (REF)
Y 15.000 (REF)
Y 15.000 (REF)
Z 0.000 (REF)
ALLIGN SIDE
.250
.500
.313
6.156
11.125
8.750
4.750
4.094
2.235

LDW 280-10690-15		
[illegible]		
SYMBOL	[illegible]	[illegible] OF CUT
2	.025 [illegible]	.007 [illegible]

NOTES:

1. ALL INFORMATION NOT APPLICABLE TO LDW 280-10690 SHALL BE CONSIDERED REFERENCE INFORMATION.
2. BEND RADII SHALL BE AS FOLLOWS:
   ~~[illegible]~~
   .025 & .032 THICKNESS, BEND RADIUS = 1/16
   .040 THICKNESS, BEND RADIUS = 3/32
3. NO TOOLING HOLES PERMITTED IN PARTS
4. DRAWING MAY BE SCALED FOR DIMENSIONS NOT SHOWN
5. ~~[illegible]~~
6. CORNER TRIM RADIUS ON FLAT PATTERN OPTIONAL 1/4 R MAX.
7. ~~[illegible]~~
8. ~~[illegible] FROM [illegible] BOTH SIDES [illegible]~~
9. ~~THE [illegible] EXTERIOR SHALL BE PROTECTED WITH [illegible] FROM CARROLL PRODUCTS INC. [illegible]~~
10. ~~[illegible] INTERIOR SURFACE AND REFINISH AS FOLLOWS: THE INTERIOR SURFACE TO BE CHEM-MILLED IN ACCORDANCE WITH [illegible]~~
11. ~~MANUFACTURED HEADS OF ALL RIVETS TO BE ON [illegible] SIDE OF [illegible]~~
12. ~~[illegible] BOTH SIDES [illegible]~~

10. ALL JOGGLES CARRY +.010 -.000 TOLERANCE.

11. FOR LDW 280-10690-15 FINISH #76 SHALL BE APPLIED TO CHEM-MILL SURFACE.

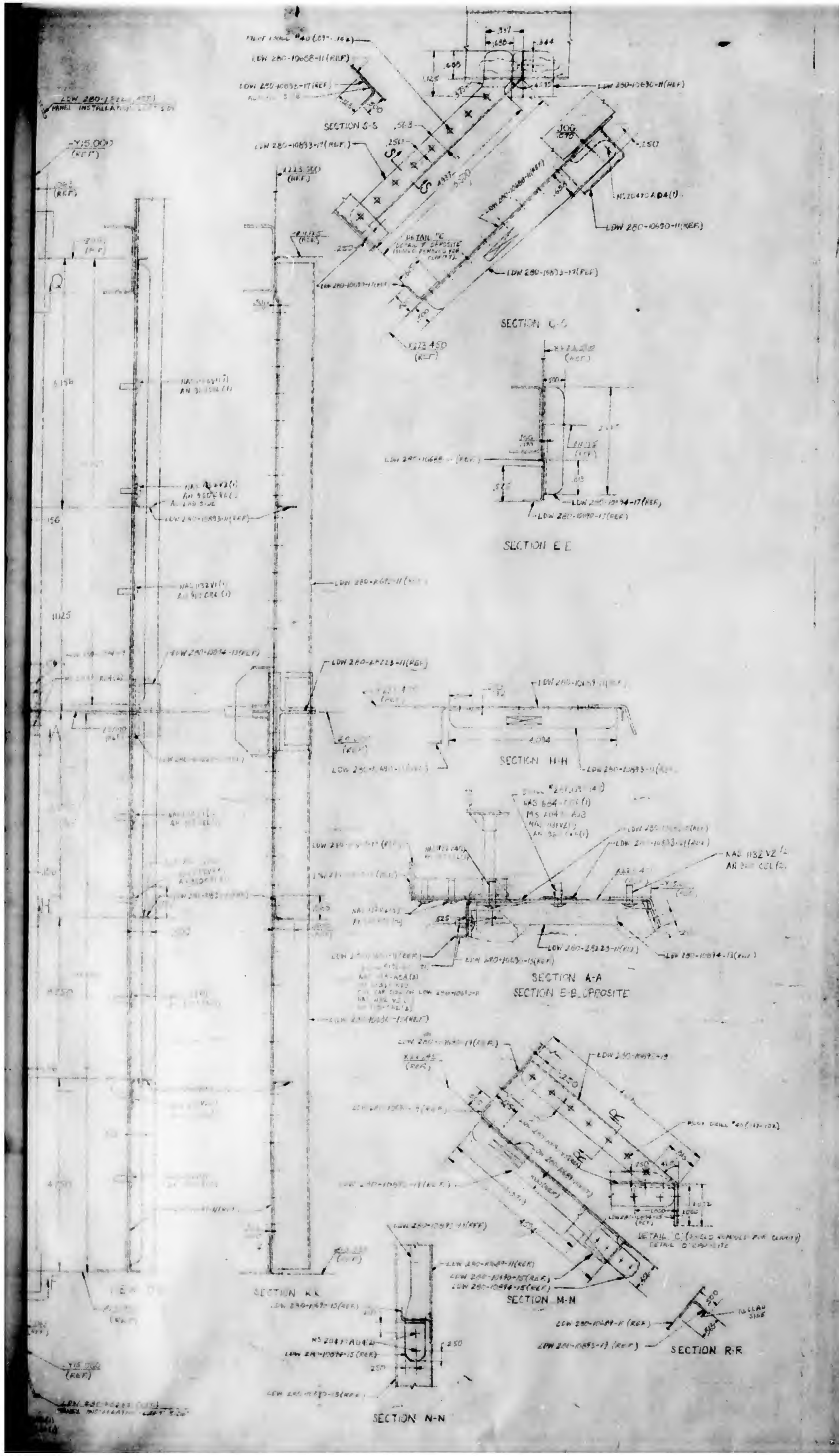
	PART NO.		NOMENCLATURE	MATERIAL	[illegible]	[illegible]	STOCK SIZE	PROCESS SYMBOL	FINISH NO.	UNIT WT	ZONE
	LDW 280-10690-19		SUPPORT	AL ALY CLAD SHT	QQ-A-287	7075	.040		-T6	88	
	LDW 280-10690-17		SUPPORT				.040				
	LDW 280-10690-15		SUPPORT				.032				
	LDW 280-10690-14		SUPPORT				[illegible] .024				
	LDW 280-10690-13		SUPPORT				[illegible] .024				
	LDW 280-10690-12		SUPPORT				[illegible] .024				
	LDW 280-10690-11		SUPPORT	AL ALY CLAD SHT	QQ-A-287	7075	[illegible] .024		-T6		

TO BE REDRAWN ON A PRODUCTION FORMAT. 3

[illegible] AIRCRAFT ENGRG CORP
[illegible], L.I., N.Y.

[illegible]
ENGINE COMPARTMENT ACCESS [illegible]
[illegible] 3-1100 TYPE II
[illegible] LDW 280-10690

LDW 280-10690


SECTION S-S
SECTION C-C
SECTION E-E
SECTION H-H
SECTION A-A
SECTION E-E OPPOSITE
SECTION K-K
SECTION M-M
SECTION N-N
SECTION R-R
VIEW D
DETAIL C
LDW 280-10690-11 (REF)
LDW 280-10893-17 (REF)
LDW 280-25223-11 (REF)
Y15.000 (REF)
X1223.450 (REF)

SYM	PROCESS	SPEC		
T6	[illegible]			
CM	CHEM-MILLING	LSP14-26100		

NOTES:
1. [illegible] NOT APPLICABLE TO LDW 280-[illegible] SHALL BE CONSIDERED REFERENCE INFORMATION
2. BEND RADII SHALL BE AS FOLLOWS:
~~[illegible] THICKNESS BEND RADIUS = 1/16~~
.024 [illegible] THICKNESS BEND RADIUS = 1/16
[illegible] THICKNESS BEND RADIUS = 3/32
3. NO TOOLING HOLES PERMITTED IN PARTS
4. DRAWING MAY BE SCALED FOR DIMENSIONS NOT SHOWN
~~5. [illegible]~~
6. CORNER TRIM RADII ON FLAT PATTERN OPTIONAL 1/4 R MAX
10. ALL JOGGLES CARRY $^{+.010}_{-.000}$ TOLERANCE.
11. FOR LDW 280-10690-15 FINISH #76 SHALL BE APPLIED TO CHEM-MILL SURFACE.

LDW 280-10690-15

CHEM-MILL LINE TOLERANCE ± 1/16 WHERE DEPTH OF ETCH IS .080 OR LESS (EXCEPT AS NOTED).
± 3/32 WHERE DEPTH OF ETCH IS GREATER THAN .080

SYMBOL	THICKNESS AFTER CHEM-MILLING	DEPTH OF CUT
2	$.025^{+.003}_{-.001}$	.007 (REF)

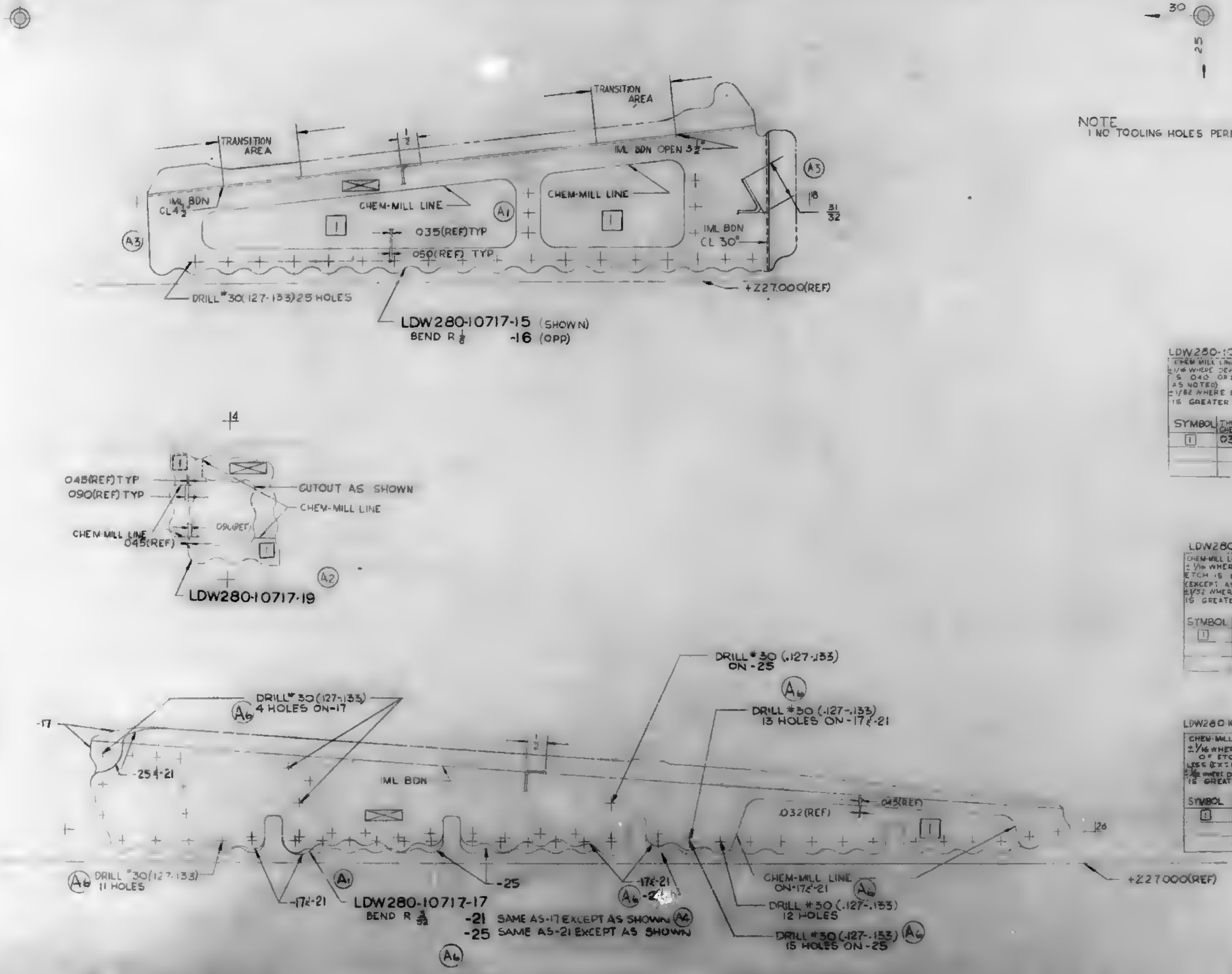
PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	MATERIAL	GOVT SPEC	COML SPEC	STOCK SIZE (EA)	PROCESS SYMBOL	FINISH
LDW 280-10690-19	SUPPORT	AL ALY CLAD SHT	QQ-A-287	7075	.040	-T6	88
LDW 280-10690-17	SUPPORT				.040		
LDW 280-10690-15	SUPPORT				.032		
LDW 280-10690-14	SUPPORT				.024		
LDW 280-10690-13	SUPPORT				.024		
LDW 280-10690-12	SUPPORT				.024		
LDW 280-10690-11	SUPPORT	AL ALY CLAD SHT	QQ-A-287	7075	.024	-T6	

TO BE REDRAWN ON A PRODUCTION FORMAT. 3

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCE UNLESS SPECIFIED FRACTIONS DECIMALS ANGLES
± 1/32 ±.030 ± 1/2°

GRUMMAN AIRCRAFT ENGRG CORP
BETHPAGE, L.I., N.Y.

SUPPORT-SHIELDING - [illegible]
ENGINE COMPARTMENT ACCES[illegible]
CONTRACT NO. NAS 9-1100
CODE IDENT NO. 26512 SIZE J LDW 280-10690
SCALE FULL


TRANSITION AREA
TRANSITION AREA
IML BDN OPEN 3½°
IML BDN CL 4½°
CHEM-MILL LINE
CHEM-MILL LINE
A1
A3
A3
1
1
.035(REF)TYP
.050(REF) TYP
IML BDN CL 30°
18
31/32
DRILL #30 (.127-.133) 25 HOLES
+227.000(REF)
LDW280-10717-15 (SHOWN)
BEND R 1/8 -16 (OPP)
30
25
14
.048(REF)TYP
.090(REF) TYP
CUTOUT AS SHOWN
CHEM-MILL LINE
CHEM MILL LINE
.045(REF)
.090(REF)
A2
LDW280-10717-19
-17
DRILL #30 (.127-.133) 4 HOLES ON-17
A6
-25 & -21
IML BDN
DRILL #30 (.127-.133) ON -25
A6
DRILL #30 (.127-.133) 13 HOLES ON -17 & -21
.032(REF)
.045(REF)
1
.26
+227.000(REF)
A6 DRILL #30 (.127-.133) 11 HOLES
-17 & -21
A1
-25
-17 & -21
-25
A6
CHEM-MILL LINE ON -17 & -21
A6
DRILL #30 (.127-.133) 12 HOLES
DRILL #30 (.127-.133) 15 HOLES ON -25
A6
LDW280-10717-17
BEND R 3/32
-21 SAME AS -17 EXCEPT AS SHOWN
A6
-25 SAME AS -21 EXCEPT AS SHOWN
A6

NOTE
1 NO TOOLING HOLES PERMITTED IN PARTS

LDW280-10717 15 & -16

CHEM MILL LINE TOLERANCE
±1/16 WHERE DEPTH OF ETCH IS .040 OR LESS (EXCEPT AS NOTED)
±1/32 WHERE DEPTH OF IS GREATER THAN .040

SYMBOL	THICKNESS AFTER CHEM-MILLING*	DEPTH OF CUT
1	.035±.002	.015(REF)

LDW280-10717-19

CHEM-MILL LINE TOLERANCE
±1/16 WHERE DEPTH OF ETCH IS .040 OR LESS (EXCEPT AS NOTED)
±1/32 WHERE DEPTH OF ETCH IS GREATER THAN .040

SYMBOL	THICKNESS AFTER CHEM-MILLING*	DEPTH OF CUT
1	.045 ± .003	.045(REF)

LDW280-10717-17 & -21

CHEM-MILL LINE TOLERANCE.
±1/16 WHERE DEPTH OF ETCH IS .040 OR LESS (EXCEPT AS NOTED)
±1/32 WHERE DEPTH OF ETCH IS GREATER THAN .040

SYMBOL	THICKNESS AFTER CHEM-MILLING*	DEPTH OF CUT
1	.032 ± .002	.013(REF)

MANUFACTURING OPERATIONS UNLESS OTHERWISE SPECIFIED NOTES CHECKED ✓ APPLY TO THIS DWG.

RUBBER STAMP PART NUMBER AND ALL OTHER MARKINGS IN REGION MARKED	✓
FILLET AND INSIDE CORNER RADII TOLERANCES .0625 TO .0629 ± .010 .0630 TO .2500 ± .015 OVER .2500 ± .030	
DEPTH SHOWN FOR TAPPED HOLES IS FULL THDS 2-3 IMP THDS BEYOND PERMISSIBLE	
EXTERNAL THREAD LENGTH SHOWN INCLUDES 2 IMPERFECT THREADS MAX.	
DO NOT CADMIUM PLATE & PAINT HOLES OR SURFACES MARKED WITH DOUBLE ASTERISK	
MISMATCH STEP OF ± .005 PERMISSIBLE DUE TO CHANGE OF CUTTERS AT INSIDE INTERSECTING SURFACES	
DIAMETERS MARKED MUST BE CONCENTRIC WITHIN FULL INDICATOR READING	
HOLES MUST BE KEPT FREE OF CHROME PLATING SOLUTION	
ALL DIMENSIONS SHOWN TO BE MET AFTER CADMIUM PLATING THICKNESS OF PLATE .0003 MIN TO .0005 MAX AND THICKNESS TO BE .0002 ON THREADED AREAS NO ALLOWANCES FOR PLATING IN HOLES	
125 SURFACE ROUGHNESS INCLUDING REAMED HOLES PER MIL-STD-10	
250 FOR ALL DRILLED HOLES	
REMOVE ALL BURRS BREAK ALL EDGES .005-.031	
INSPECTION INFORMATION MINIMUM PERMISSIBLE AVERAGE EDGE DISTANCE MARKED IS	
SYMBOL DENOTES SURFACE TO BE MACHINED	
UNLESS OTHERWISE SPECIFIED TOLERANCE ON FLANGES IS ± 1/32	
LENGTHS OF AN, MS & NAS AL ALY RIVETS SHORTER THAN 1 INCH ARE NOT SPECIFIED	
TOLERANCE ON LOFTED DELINEATIONS IS ± 1/32	✓

LDW280-10717 A

GRUMMAN AIRCRAFT ENGRG CORP BETHPAGE L.I. NEW YORK

LEM	SIZE F	CODE IDENT NO. 26512	LDW280-10717	A
MODEL OR END ITEM	SCALE FULL		SHEET 3.00	

2 FOR PHOTO REPRODUCTION 1 12

NAS 9-1100

01

GRUMMAN AIRCRAFT ENGINEERING CORP.
CODE IDENT NO. 26512
ENGINEERING ORDER

NO. LEO 280
CHANGE REQ. NO. LEM 430-730

ADD EFFE[illegible] [illegible] 30
TO THE FOLLO[illegible]

DRAWING NO	DASH NO	CHG NO	[illegible]	[illegible]
LDW 280-23[illegible]	-1	B	[illegible]	[illegible]
LDW 280-10111	[illegible]	[illegible]	BKT [illegible] TANK [illegible]	[illegible]
-10112	[illegible]	E1	[illegible]	
-10113	[illegible]	C1	[illegible] TANK [illegible]	
-10114	[illegible]	L1	[illegible]	
-10115	[illegible]	C1	[illegible]	
-10116	[illegible]	E2	[illegible] TANK [illegible]	
-10150	[illegible]	B3	CHANNEL RCS TANK SPT	
-10207	[illegible]	B1	[illegible] TANK SPT	
-10215	[illegible]	C1	[illegible]	
-10226	[illegible]		[illegible] SPT	[illegible]
-11072	-11	A1	[illegible]	[illegible]
-10270	-11	E1	ANGLE [illegible] TANK SPT	[illegible]
-10274	[illegible]	C1	ANGLE [illegible] TANK [illegible]	
-10343	[illegible]	A2	CLIP [illegible] TANK [illegible]	
-10344	[illegible]	B1	BKT [illegible] TANK SPT [illegible]	
-10363	[illegible]	A1	PLATE [illegible] TANK SPT	
-10370	-9	B2	BKT [illegible]	
-10383	[illegible]	A1	ANGLE RCS [illegible] TANK PIPE SPT	
-10398	[illegible]	B1	CHANN. [illegible] SPT	
-10407	-11	B1	ANGLE [illegible] TANK SPT	
-10[illegible]6	-1	B1	FILLER [illegible] TANK SPT	
-10835	[illegible]	A1	CHANNEL [illegible] TANK [illegible] SPT	
LDW 280[illegible]0027	-1	C1	[illegible] TANK [illegible]	
LDW 280M 0050	-3	B1	BUSH [illegible] RCS TANK [illegible]	LDW 280-28026

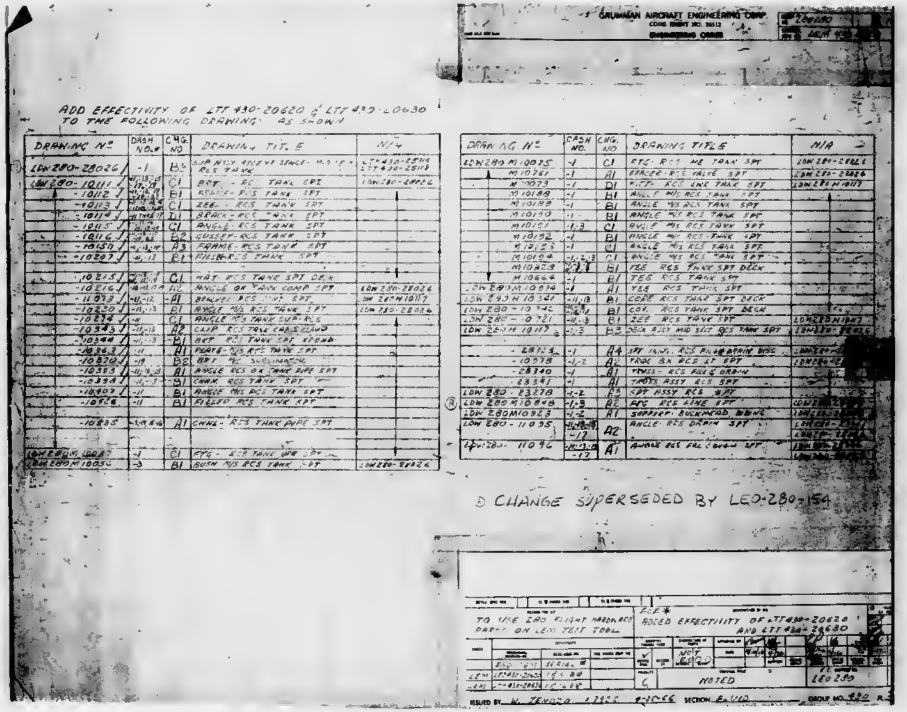
DRAWING NO	DASH NO	CHG NO	DRAWING TITLE	N/A
LDW 280M 0075	-1	C1	[illegible] TANK SPT	LDW 280-28026
[illegible]	-1	A1	[illegible] TANK SPT	LDW 280-28026
[illegible]	-1	B1	[illegible] TANK SPT	LDW 280 M 10117
[illegible]	-1	E1	[illegible] TANK SPT	
[illegible]	-1	E1	ANGLE [illegible] TANK SPT	
[illegible]	[illegible]	B1	ANGLE [illegible] TANK SPT	
[illegible]	-1,3	C1	[illegible] SPT	
[illegible]	-1	E1	ANGLE [illegible] TANK SPT	
[illegible]	-1	[illegible]	ANGLE [illegible] TANK SPT	
[illegible]	[illegible]	[illegible]	[illegible] TANK SPT	
[illegible]	[illegible]	E1	TEE RCS TANK SPT DECK	
[illegible]	-1	E1	TEE [illegible] TANK SPT	
[illegible]	-1	H1	TEE [illegible] SPT	
[illegible]	[illegible]	B1	[illegible] SPT DECK	
[illegible]	[illegible]	B1	[illegible] TANK SPT DECK	
LDW 28[illegible]	[illegible]	B1	[illegible] TANK SPT	LDW 280 M 10117
LDW 2[illegible]	-3	B2	[illegible] RCS TANK SPT	LDW 280-28026
[illegible]	-1	A4	SPT [illegible] FILL & DRAIN DISC	LDW 280-2[illegible]
-10975	-1,7	A[illegible]	[illegible] RCS [illegible] SPT	LDW 280-28[illegible]
-28340	-1	A1	[illegible] RCS FILL & DRAIN	
-23341	-1	A1	[illegible] ASSY [illegible] SPT	
LDW 280-23278	-1,-2	[illegible]	SPT ASSY RCS SPT	
LDW 280[illegible]0248	-1,-3	A2	[illegible] RCS [illegible] SPT	LDW 280-23277
LDW 280M10923	-1,-2	A1	SUPPORT BULKHEAD [illegible]	LDW 280-23278
LDW 280-11035	-11,13,15 -17	A2	ANGLE RCS DRAIN SPT	LDW 280-23341 LDW 280-28026
LDW 280-11036	-11,[illegible] -17	A1	ANGLE RCS FILL [illegible] SPT	LDW 280-28340 LDW 280-28026

CHANGE SUPERSEDED BY LEO-280-154

[illegible]	ADD EFFECTIVITY OF LTE 430-20620 AND LTE 430-20630
	NOTED
	LEO 280

ISSUED BY [illegible] 4-15-66 SECTION [illegible] GROUP NO. [illegible]

01 NAS 9-1100



GRUMMAN AIRCRAFT ENGINEERING CORP.

ENGINEERING ORDER

LDW280

LEM 430

ADD EFFECTIVITY OF LTT 430-20620 & LTT 430-20630
TO THE FOLLOWING DRAWING AS SHOWN

DRAWING Nº	DASH NO.	CHG. NO	DRAWING TITLE	N/A
LDW280-28026	-1	B3	SUP ASSY ASCENT STAGE - M/S [illegible] RCS TANK	LTT430-25114 LTT430-25118
LDW280-10111	[illegible]	C1	BRT - RCS TANK SPT	LDW280-28026
-10112	[illegible]	B1	FRAME - RCS TANK SPT	
-10113	[illegible]	C1	ZEE - RCS TANK SPT	
-10114	-11 THRU 17	D1	BRACK - RCS TANK SPT	
-10115	[illegible]	C1	ANGLE - RCS TANK SPT	
-10116	[illegible]	B2	GUSSET - RCS TANK SPT	
-10150	[illegible]	A3	FRAME - RCS TANK SPT	
-10207	-11,-13	B1	FILLER - RCS TANK SPT	
-10215	[illegible]	C1	HAT - RCS TANK SPT DECK	
-10216	[illegible]	A2	ANGLE OX TANK COMP SPT	LDW280-28026
-11073	-11,-12	A1	BRACKET RCS TANK SPT	LDW280M10117
-10230	-11,-13	B1	ANGLE M/S RCS TANK SPT	LDW280-28026
-10274	-11	C1	ANGLE M/S TANK SUP - RCS	
-10343	-11,-13	A2	CLIP RCS TANK CABLE CLAMP	
-10344	-11,-13	B1	BKT RCS TANK SPT XPOND	
-10363	-11	A1	PLATE - M/S RCS TANK SPT	
-10870	-19	B2	BKT M/S SUBLIMATOR	
-10383	-11,-13,-15	A1	ANGLE RCS OX TANK PIPE SPT	
-10384	-11,-13	B1	CHAN. RCS TANK SPT	
-10407	-11	B1	ANGLE M/S RCS TANK SPT	
-10926	-11	B1	FILLER RCS TANK SPT	
-10835	[illegible]	A1	CHNL - RCS TANK PIPE SPT	
LDW280M10087	-1	C1	FTG - RCS TANK [illegible] SPT	
LDW280M10056	-3	B1	BUSH M/S RCS TANK SPT	LDW280-28026

DRAWING Nº	DASH NO.	CHG. NO	DRAWING TITLE	N/A
LDW280M10075	-1	C1	FTG - RCS HE TANK SPT	LDW280-28026
M10761	-1	A1	SPACER - RCS VALVE SPT	LDW280-28026
M10073	-1	D1	FITT - RCS LWR TANK SPT	LDW280M10117
M10188	-1	B1	ANGLE M/S RCS TANK SPT	
M10189	-1	B1	ANGLE M/S RCS TANK SPT	
M10190	-1	B1	ANGLE M/S RCS TANK SPT	
M10191	-1,-3	C1	ANGLE M/S RCS TANK SPT	
M10192	-1	B1	ANGLE M/S RCS TANK SPT	
M10193	-1	C1	ANGLE M/S RCS TANK SPT	
M10194	-1,-2,-3	C1	ANGLE M/S RCS TANK SPT	
M10423	[illegible]	B1	TEE RCS TANK SPT DECK	
M10664	-1	B1	TEE RCS TANK SPT	
LDW280M10934	-1	A1	TEE RCS TANK SPT	
LDW280M10321	-11,-13	B1	CORE RCS TANK SPT DECK	
LDW280-10342	[illegible]	B1	COV. RCS TANK SPT DECK	
LDW280-10721	-11,-13	B1	ZEE RCS TANK SPT	LDW280M10117
LDW280M10117	-1,-3	B3	DECK ASSY MID SECT RCS TANK SPT	LDW280-28026
-28323	-1	A4	SPT INST. RCS FILL & DRAIN DISC	[illegible]
-10975	-1,-2	A2	TRGE BX RCS LT SPT	[illegible]
-28340	-1	A1	TRUSS - RCS FILL & DRAIN	
-28341	-1	A1	TRUSS ASSY RCS SPT	
LDW280-23278	-1,-2	A3	SPT ASSY RCS SPT	
Ⓡ LDW280M10848	-1,-3	A2	FTG RCS LINE SPT	[illegible]
LDW280M10923	-1,-2	A1	SUPPORT BULKHEAD [illegible]	[illegible]
LDW280-11095	[illegible] -17	A2	ANGLE RCS DRAIN SPT	[illegible]
LDW280-11096	[illegible] -17	A1	ANGLE RCS FILL & DRAIN SPT	[illegible]

Ⓡ CHANGE SUPERSEDED BY LEO-280-154

TO USE 280 FLIGHT HARDWARE PARTS ON LEM TEST TOOL

ECP*
ADDED EFFECTIVITY OF LTT430-20620
AND LTT430-20630

	END ITEM	SERIAL #
LEM	LTT430-20620	[illegible]
LEM	LTT430-20630	[illegible]

NOT REQD

6

NOTED

LEO280

ISSUED BY W. JENOZO #7325 9-10-66 SECTION [illegible] GROUP NO. 430

01 NAS 9-1100